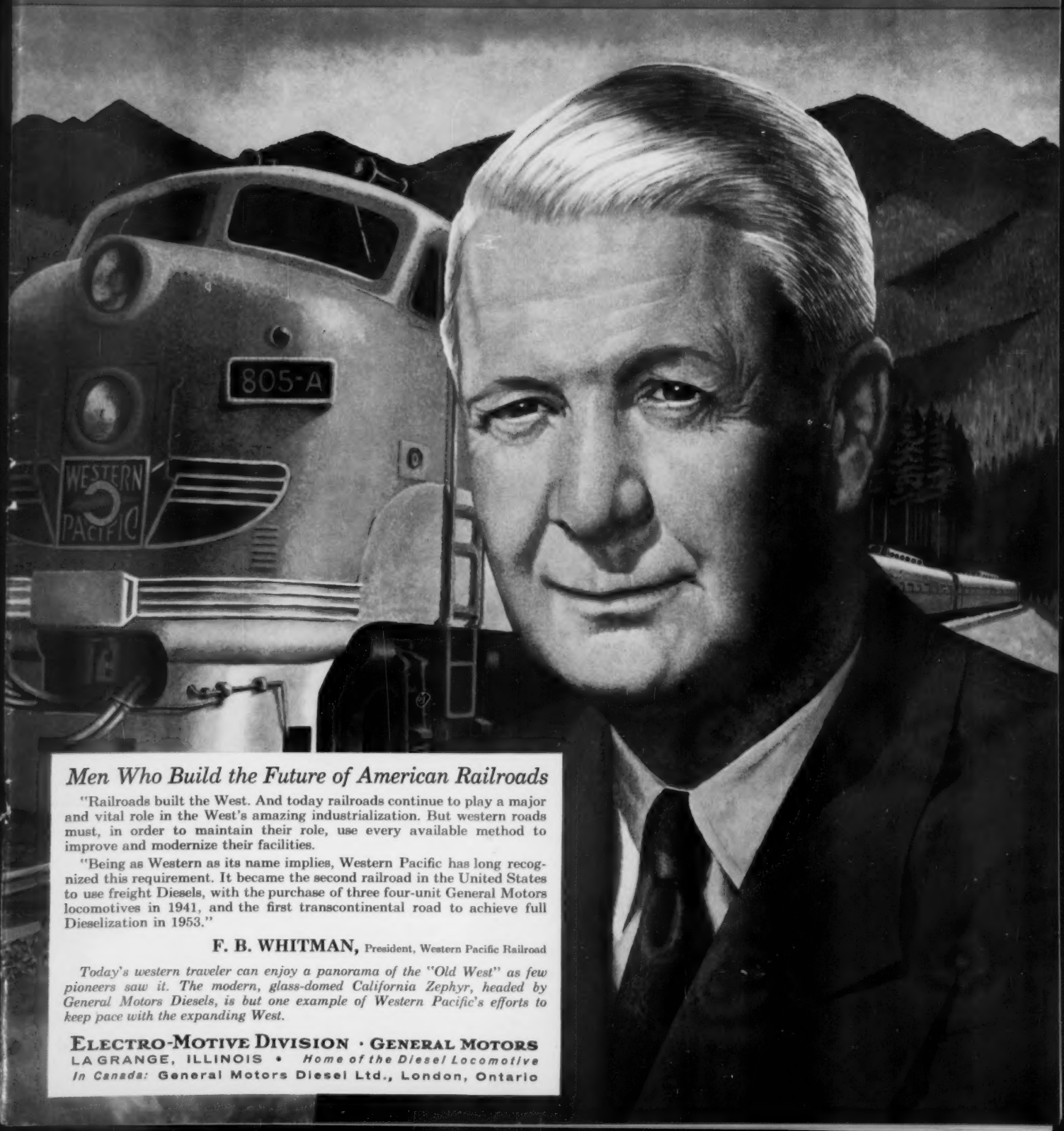
Two Roads Slash Costs With Joint Facilities

March 10, 1958

RAILWAY AGE *weekly*



Men Who Build the Future of American Railroads

"Railroads built the West. And today railroads continue to play a major and vital role in the West's amazing industrialization. But western roads must, in order to maintain their role, use every available method to improve and modernize their facilities.

"Being as Western as its name implies, Western Pacific has long recognized this requirement. It became the second railroad in the United States to use freight Diesels, with the purchase of three four-unit General Motors locomotives in 1941, and the first transcontinental road to achieve full Dieselization in 1953."

F. B. WHITMAN, President, Western Pacific Railroad

Today's western traveler can enjoy a panorama of the "Old West" as few pioneers saw it. The modern, glass-domed California Zephyr, headed by General Motors Diesels, is but one example of Western Pacific's efforts to keep pace with the expanding West.

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Needed:

"General Practitioners" in Transportation

Today, you are deprived of the best and most economical transportation because public policies place artificial and severe restrictions upon the opportunity of any one form of transportation, such as railroads, to serve you by the use of other means of transportation, such as that by highway, waterway or airway.

Yet, in other industries, diversification of products has become common, and has proved beneficial both to those industries and to the public.

Why, then, shouldn't the public be allowed to benefit by diversification in transportation?

Clearly, diversification would be to the advantage of the nation's shippers. They could then arrange for their transportation through a single transport company which could utilize any or all means of carriage needed to do the particular job at hand most efficiently. That's why the railroads ask for removal of present artificial limitations.

They seek only the same opportunity as anyone else to enter into other fields of transportation. Then they could become "general practitioners" in transportation — using a wide variety of facilities to serve you and the nation more efficiently.

Isn't this common sense?

ASSOCIATION OF AMERICAN RAILROADS
WASHINGTON, D. C.

New Reading Gondolas Roll Into Service

Here are some of the 400 welded gondolas recently built for the Reading by Bethlehem's Johnstown, Pa., shops. These low-slung 70-ton cars will weather many years of heavy-duty service; they combine unusual ruggedness with the most advanced features of design.

As the photograph shows, the fixed-end bodies are heavily ribbed for extra strength and resistance to shock. Body plates up to and including 3/8 in. are of copper-bearing steel. Running gear consists of AAR one-wear wrought-steel wheels and AAR forged-steel axles with 6 x 11 journals.

Length over strikers is 54 ft 9 in.; length inside, 52 ft 6 in.; width inside, 9 ft 6 in. From rail to top of side, the height is 7 ft 5/16 in.; from rail to floor, 3 ft 6 5/16 in. Truck centers are 43 ft 9 in. Capacity, level-full, is 1,745 cu ft.

When your own requirements call for gondolas, hopper cars, or other types, we suggest you check with our engineering division. We are equipped to plan the work from scratch, or to specifications that you supply. Once the design is approved, you can rely on the Bethlehem shops for an excellent production job, and for quick delivery.

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Increasing deoxidation—a key step in the manufacture of new 4-D Wrought Iron.

Now—from Byers Rescarch—
an even better Wrought Iron
for modern corrosion control—

new 4-D wrought iron

Out of the laboratory and into production comes a newly formulated Wrought Iron to strengthen man's arsenal of corrosion resistant weapons.

New 4-D Wrought Iron is at least 25% *more* corrosion resistant than standard Wrought Iron—long an industry standard for superior corrosion resistance. This significant metallurgical advance is the result of 17 years of continuing research by Byers metallurgists.

And here's what it means to you.

Seventeen-year in-service and laboratory tests prove that 4-D Wrought Iron is superior not only to standard Wrought Iron, but has much greater corrosion resistance than other materials which are sometimes offered as substitutes. Thus, the economy of using standard Wrought Iron can now be compounded through the use of new 4-D Wrought Iron.

In addition to increased corrosion resistance, new 4-D Wrought Iron has greater uniformity and improved physical and mechanical properties. This is attained by substantially increasing the deoxidation of the base metal, increasing its phosphorous content, and using a more siliceous slag.

And the price of new 4-D Wrought Iron? No increase. Despite higher production costs, the price of Wrought Iron will remain the same.

Write us for new 4-D Wrought Iron literature, or contact the Byers representative for complete details. A. M. Byers Company, Clark Building, Pittsburgh 22, Pa.

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Corrosion costs you more than Wrought Iron

RAILWAY AGE *weekly*

March 10, 1958 • Vol. 144, No. 10

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Railroads tackle discriminatory taxation p.9

A proposal to cut non-mainline property taxes of five railroads by 50 per cent is before the New Jersey legislature. If it's approved, the carriers could save up to $7,000,000 a year. In Kansas, railroad protests against alleged inequalities in tax assessments are due to be heard before the state's supreme court.

Next DL&W-Erie coordination step is ready to go p.18

Loaded with thrift potential, the roads' pair-up of track needs only the ICC's green light. Moving force behind the 76-mile project is management recognition of what can be done plus the agreement to make it work.

How the 'Q' built a yard with a shoehorn p.20

This was a job that taxed the Burlington engineering staff's ingenuity. Cicero Yard had to be built under traffic—and there wasn't any elbow room to ease construction pressures.

Crossing costs—the smog clears in California p.32

A three-part approach has been worked out on the west coast that could set a pattern for rail-highway crossing developments. One phase of the scheme is a priority system for improvement programs.

It's engineering week at Chicago p.34

Highlights of what to look for at the NRAA exhibition at the Coliseum. And the official program for the AREA convention at the Sherman Hotel.

Manufacturers' showcase p.38

A comprehensive New Products report on what's new in engineering and m/w tools and equipment. Six pages of useful, timely information.

CNR and CPR fight non-op boosts p.60

The railroads are using a new weapon in their battle against demands by non-operating unions for wage increases and extra fringe benefits. They've rested their case on a wage comparison study of equivalent occupational skills in outside industry.

Action Page—End the ICC? Not unless— p.66

What justification is there for the recent clamor to eliminate the commission? This "cure" might leave the railroads even worse off. Realistic amendment of the Interstate Commerce Act is what's needed. But to fight curtailment of obsolete powers only invites extremist attacks.

Buy the BEST . . . buy JACKSON!

See the JACKSON* TRACK MAINTAINER

* SHOWN WITH HYDRAULIC SPOT-TAMPING JACKS, OFFERED AS ACCESSORY EQUIPMENT ON 1958 MODELS AND IN KIT FORM FOR EARLIER MODELS.

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Learn why leading roads bought more of these machines during the past three years than all others in its category combined . . . and why it continues to be, by long odds, first choice wherever the complete facts are known. For both putting up and maintaining finest track under all conditions, this machine really has no equal. Be sure to see it and the other Jackson machines at the show.

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LUDINGTON, MICHIGAN

Week at a Glance CONT.

Current Statistics

Operating revenues, twelve months	
1957	$10,491,403,274
1956	10,545,288,905
Operating expenses, twelve months	
1957	$8,227,523,311
1956	8,102,061,592
Taxes, twelve months	
1957	$1,068,421,526
1956	1,120,856,696
Net railway operating income, twelve months	
1957	$ 922,343,635
1956	1,070,313,927
Net income estimated, twelve months	
1957	$732,000,000
1956	881,000,000
Average price 20 railroad stocks	
March 4, 1958	68.58
March 5, 1957	90.27
Carloadings revenue freight	
Eight weeks, 1958	4,272,554
Eight weeks, 1957	5,180,800
Average daily freight car surplus	
Wk. ended Mar. 1, 1958	110,481
Wk. ended Mar. 2, 1957	5,982
Average daily freight car shortage	
Wk. ended Mar. 1, 1958	339
Wk. ended Mar. 2, 1957	2,225
Freight cars on order	
February 1, 1958	48,787
February 1, 1957	114,656
Freight cars delivered	
One month, 1958	7,219
One month, 1957	8,403

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Short and Significant

Faster freight schedules . . .

continue to crop up in the west. Santa Fe and Rock Island have made their five-day transcontinental time effective on all freight, not just forwarder and LCL shipments. Santa Fe's new time to Richmond, Cal., is 77 hours. Southern Pacific has trimmed a day off its schedules from Chicago and St. Louis to California points.

The 3.6% freight rate increase . . .

authorized for Canadian railroads last December has been suspended until May 1. Action was taken by the federal cabinet to hear opposition to the increase by eight of Canada's ten provincial governments. The increase, it was estimated, would have raised railroad revenues by $15,000,000 a year.

B&O's two Budd-built Slumbercoaches . . .

went into service March 2 on the Baltimore-Washington-Chicago "Columbian." The cars—one on each "Columbian" in each direction—provide sleeping accommodations, at a small extra charge, for coach-fare passengers.

Railroads are losing traffic . . .

and western products are being priced out of competitive markets in the East. This is being done by a series of flat percentage freight rate boosts. At least, that's what Oregon's Governor Holmes contends. He recommends formation of a mountain-Pacific region governors conference to seek adjustment of the competitive freight rate structure.

State-wide conference on industrial development . . .

for Wisconsin will be held by the Chicago & North Western next week in Milwaukee. Some 350 local ID leaders from throughout the state are expected to attend the one-day session. C&NW Chairman Ben W. Heineman will outline the road's role in ID.

New drive for repeal of the transport taxes . . .

is under way. Thirteen of the Senate Interstate Commerce Committee's 15 members have joined in sponsoring repeal legislation. It is a subcommittee of this committee which is investigating the "deteriorating railroad situation." Taxes involved are the levies on amounts paid for for-hire transportation—3 per cent on freight bills and 10 per cent on passenger fares.

Trucking has a future . . .

on the C&EI. The road holds unrestricted (as to commodity) motor common carrier authority in Illinois. The rights, secured several years ago, permit C&EI to handle by truck both intrastate and interstate commerce within Illinois. A traffic man from the trucking industry may be added to C&EI's staff to help realize the potential the road sees in the situation.

CUT FUEL COST 50%

Since they switched to "Jimmy" Diesel

Railroads are switching to General Motors Diesel engines in maintenance-of-way equipment for the same good reasons as in motive power. Look what happened when the Wabash Railroad replaced a gasoline engine with a "Jimmy" Diesel in this track cleaner.

Superintendent of Work Equipment R. S. Stephens reports *a 50% reduction in fuel costs!* A 3-cylinder GM Series 71 Diesel, replacing an 8-cylinder gasoline engine, uses only 10 to 25 gallons of low-cost fuel in 6 hours—average consumption about 3 gallons per hour. And the machine maintains steady production, loading 40 cubic yards of ballast into hopper in 10 minutes.

Thinking of repowering on- or off-track equipment? Thinking of buying a new tractor, loader, tie-tamper or ballast cleaner? You'll get work done faster and save on fuel and upkeep with GM 2-cycle Diesels. Single engines 30 to 300 h.p.; multiple units up to 893 h.p. Ask your GM Diesel distributor for the facts—or write us.

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Now—more than ever—
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A GM "3-71" Diesel powers track cleaner used by Wabash Railroad near Decatur, Illinois

RRs Fight Alleged Tax Discrimination

The New Jersey legislature is pondering a proposal to cut non-mainline property taxes of five railroads by 50 per cent. Meanwhile, MoPac and KCS are preparing to take their case to the Kansas Supreme Court.

The question of discriminatory railroad taxation is headed for important decisions in New Jersey and Kansas.

In New Jersey, five eastern railroads could save between $6,000,000 and $7,000,000 a year on non-mainline property taxes if proposals now before the state legislature are approved.

The Delaware, Lackawanna and Western, Pennsylvania, Jersey Central, Lehigh Valley and Erie are now paying some $14,500,000 a year in taxes on non-mainline properties in New Jersey. Recently the state supreme court dismissed an appeal by the railroads for a reduction in the taxes.

The railroads claimed—and the tax assessors admitted—that taxes on their non-mainline properties were based on 100 per cent assessment of true value, while other properties were assessed at a much smaller percentage of market value.

Now the Tax Policy Commission has recommended, with Governor Robert B. Meyner's approval, that the taxes on second-class railroad holdings be reduced at least 50 per cent as part of a general overhaul of assessment practices. Some opposition is expected to develop, but railroad observers give the plan a "fair" chance of passing the legislature.

A somewhat similar situation exists in Kansas, where railroad protests against alleged inequalities in tax assessments are headed for a hearing before the state supreme court.

Missouri Pacific and Kansas City Southern are basing their case on charges that their property in Kansas is assessed for tax purposes in the 60% range, while state tax studies show average assessments far below that figure (Railway Age, Feb. 17, p. 7).

As matters now stand:

- MoPac has filed suit in 60 Kansas counties and has entered an amended petition in Cherokee County. The court has already sustained a demurrer to the road's original petition in the county. After similar action is taken on the amended petition, MoPac will appeal to the Kansas Supreme Court.
- KCS has filed in Cherokee County District Court notices of appeal from the court's action (1) in sustaining demurrer in suits for recovery of 1956 and 1957 taxes paid under protest; and (2) in dismissing an appeal from a ruling of the state Board of Tax Appeals which sustained the assessment as made by the state Property Valuation Department.

It's possible that the MoPac-KCS cases may be consolidated for hearing before the Supreme Court, since they involve the same basic question.

- Even if the two railroads should win the case, however, other similarly assessed carriers could not collect refunds on tax overpayments because they were not made under protest.
- The suits have resulted in the impounding of more than $750,000 in 1957 tax payments, representing half the total protested for the year. Payment of the second half of '57 taxes by June 20 will raise the total to more than $1,500,000.

The situation in Cherokee county might be considered typical; MoPac and KCS approached it in similar fashion.

Missouri Pacific charges that the assessed value of all its Kansas property was fixed for ad valorem tax purposes at $49,727,529. Of the total, $478,381 was apportioned to Cherokee county. But, the road contends, this valuation was based on 60% of actual value, while "real property in the state of Kansas was assessed and valued in 1957 at an average statewide ratio of approximately 22.3% of its actual or market value, and real property in Cherokee county was assessed and valued . . . at an average ratio of 20% of its actual or market value."

MoPac cites a Real Estate Assessment Ratio Study made by the State Commission of Revenue and Taxation as source for the state-wide figures.

The railroad received a 1957 tax bill totaling $24,528.68 for Cherokee County, made the first-half payment of $12,264.34 and filed protest covering $7,708.85 of the initial payment.

MoPac charged that $15,417.70 of the total '57 bill is "excessive, illegal and void" and cited three reasons to back up its argument:

- Other property was assessed for ad valorem purposes at lower ratios to its

Canadian Pacific Extends Its 'Piggyback'

Trailer-on-flat-car operations have been stretched 482 miles by the CPR to link Montreal, Que., and Saint John, N.B. The road has been operating solid piggyback trains nightly in both directions between Montreal and Toronto. The new Saint John-Montreal service makes possible second-morning truck deliveries in either terminal. Photo, at CPR's Montreal piggyback yard, shows two trailers of Speedway Express of Saint John, and a Smith Transport trailer, first to be loaded for Saint John handling.

actual value and the state commission knew of the variation.

- The assessment violated the state constitution because "assessment was not made on a uniform and equal basis or rate with other property."
- The assessment violated Section 1 of the 14th Amendment of the Constitution of the United States—"it was and is discriminatory and deprives Missouri Pacific of its property without due process of law and denied [the railroad] the equal protection of the laws."

KCS took a similar slant. Market value of its Kansas properties was set at $4,061,654. The commission fixed the value for tax assessment purposes at $2,436,992. From that total, $601,528 was allocated to Cherokee county. KCS charges that $401,019 represents an "illegal and void valuation" and that $19,259.27 of the road's $28,888.89 1957 tax bill is likewise illegal and void. The road paid the first half of the bill, $9,629.64 of it under protest.

Some observers see the railroads' action as having greater significance than that involving railroad taxation alone. It's possible, they believe, that the outcome could have an effect on the entire tax assessment structure—depending, of course, on how far up the judicial ladder the case is carried, who wins, and how broad the final decision is.

Already, one section of a 1957 revenue law has been challenged as unconstitutional—a section providing that an appeal may be taken to district court from orders of the state board of tax appeals. The carriers cited this basis in filing appeals.

They also acted under an earlier law permitting a taxpayer who feels his taxes are unlawfully levied to pay under protest and then file suit to recover within 30 days.

The road emphasized that the Kansas case does not question the unit value of the company as determined by the state. The only point at issue, KCS declared, "is whether . . . railroads should be assessed and taxed at 60% of true or 100% value when other property is generally assessed . . . [at] approximately 22.3% of the true 100% market value."

Katy Asks Permission to Drop Fort Worth Trains

The Katy has applied to the Texas Railroad Commission for permission to drop two trains which handle "Texas Special" traffic between Denison and Waco, via Fort Worth.

Declining revenue is the main reason for the move. Katy expects to gain corollary benefits from discontinuing the trains by eliminating delays which have hit the "Special" at both Denison and Waco.

Clearing the Record—

A newspaper story originating in Jacksonville, Fla., last week carried an ominous note. It quoted John W. Smith, president of the Seaboard, to the effect that the rail outlook is dim and that the carriers "are pulling in their horns."

The dispatch attributed to Mr. Smith a remark that he didn't think railroads would go out of business but the day might come when they would have to be taken over by the government in order to keep them running.

Railway Age questioned the story, went straight to the railroad to get the facts.

Mr. Smith did say that railroads are going to sit tight "until we see which way economic conditions are going." And about government ownership, he said: "I don't believe the railroads will go out of business, but *unless legislative relief is forthcoming*, there might come a day when they would have to be taken over by the government."

A single phrase can make quite a difference. In this case we think it did.

Watching Washington *with Walter Taft*

- **STATES CAN'T STOP USE OF SECTION 22 RATES** by the federal government for its intrastate shipments. That will be the effect of a decision by the United States Supreme Court in a suit brought by U.S. The decision affirmed a lower-court ruling which held a California law unconstitutional.

- **THE CALIFORNIA LAW** was enacted in 1955. It extended the jurisdiction of that state's Public Utilities Commission to carrier rate reductions on intrastate shipments by government agencies.

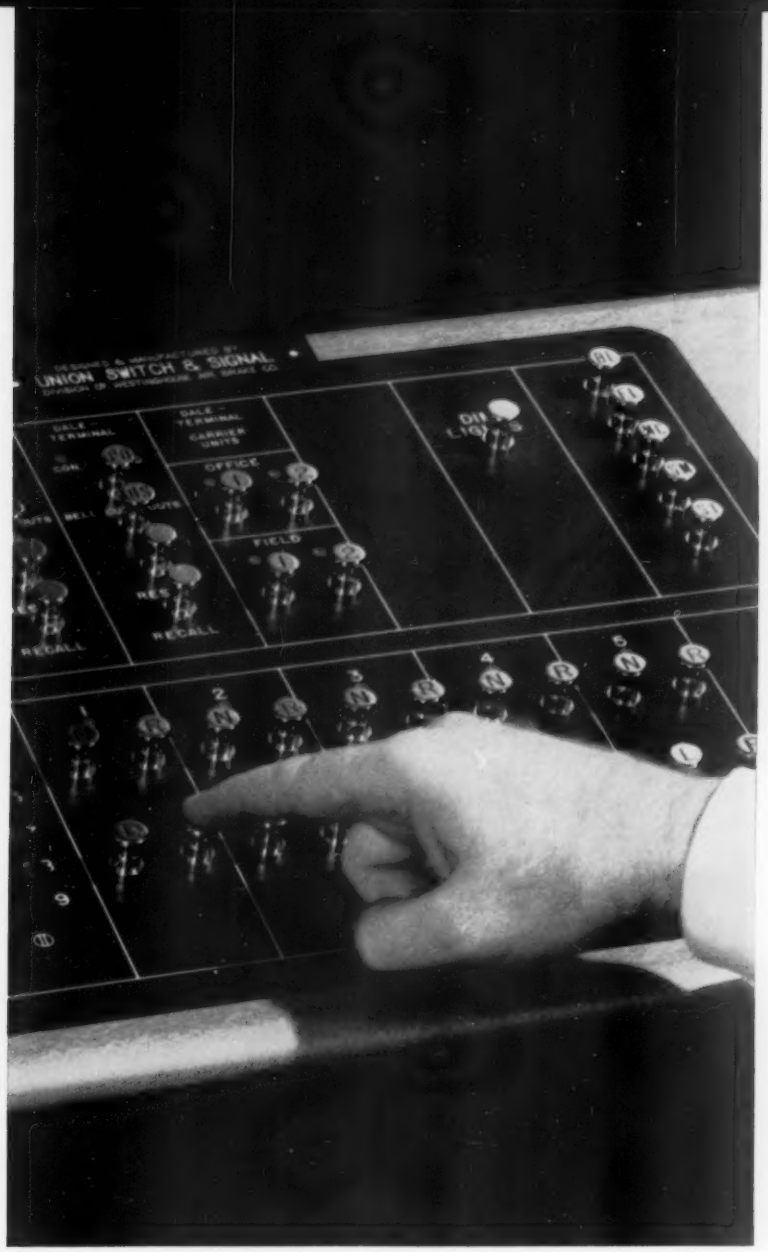
- **PURPOSE OF THE LAW** was to prevent cut-throat competition. It gave the state commission new minimum-rate powers, providing that rate concessions to government agencies might be permitted "to the extent and subject to such conditions" as the commission considered "just and reasonable."

- **AT STAKE** for the federal government were Section 22 quotations providing discount rates on a large volume of military traffic moving between points in California. The Supreme Court's ruling was a 6-to-3 decision. Dissenters complained that the majority acted with "unnecessary haste"—before California had a chance to enforce its law and thus afford a basis for determining "whether it does in truth trespass on paramount federal interests."

- **BIG TRUCKS,** with gross weight of 50,000 lb or more, now account for about one-tenth of all trucks operated on main rural roads. Latest figures compiled by the Bureau of Public Roads indicate that each thousand trucks operating in 1956 included 93 in the 50,000-lb-and-over group. That was more than 2½ times the comparable 1949 figure of 36.

- **BIG TRUCK-TRAILER COMBINATIONS,** also exceeding 50,000 lb in gross weight, account for more than one-quarter of such combinations. The bureau's 1956 count found 266 of them in every thousand combinations then moving over the main rural roads. That, too, was more than twice the comparable 1949 figure of 127.

- **REFRIGERATOR CARS GROSS MORE** on the average than other types. That's the showing of an analysis by the ICC's Bureau of Transport Economics and Statistics. On all runs, reefers grossed an average of $462 in 1956. The range for other types was from the box car's $340 to the hopper's $150. The reefer remained first for all intraterritorial movements, but its $570 gross for interterritorial movements was topped in that field by five other figures. They ranged from the flat car's $734 to the box car's $597.



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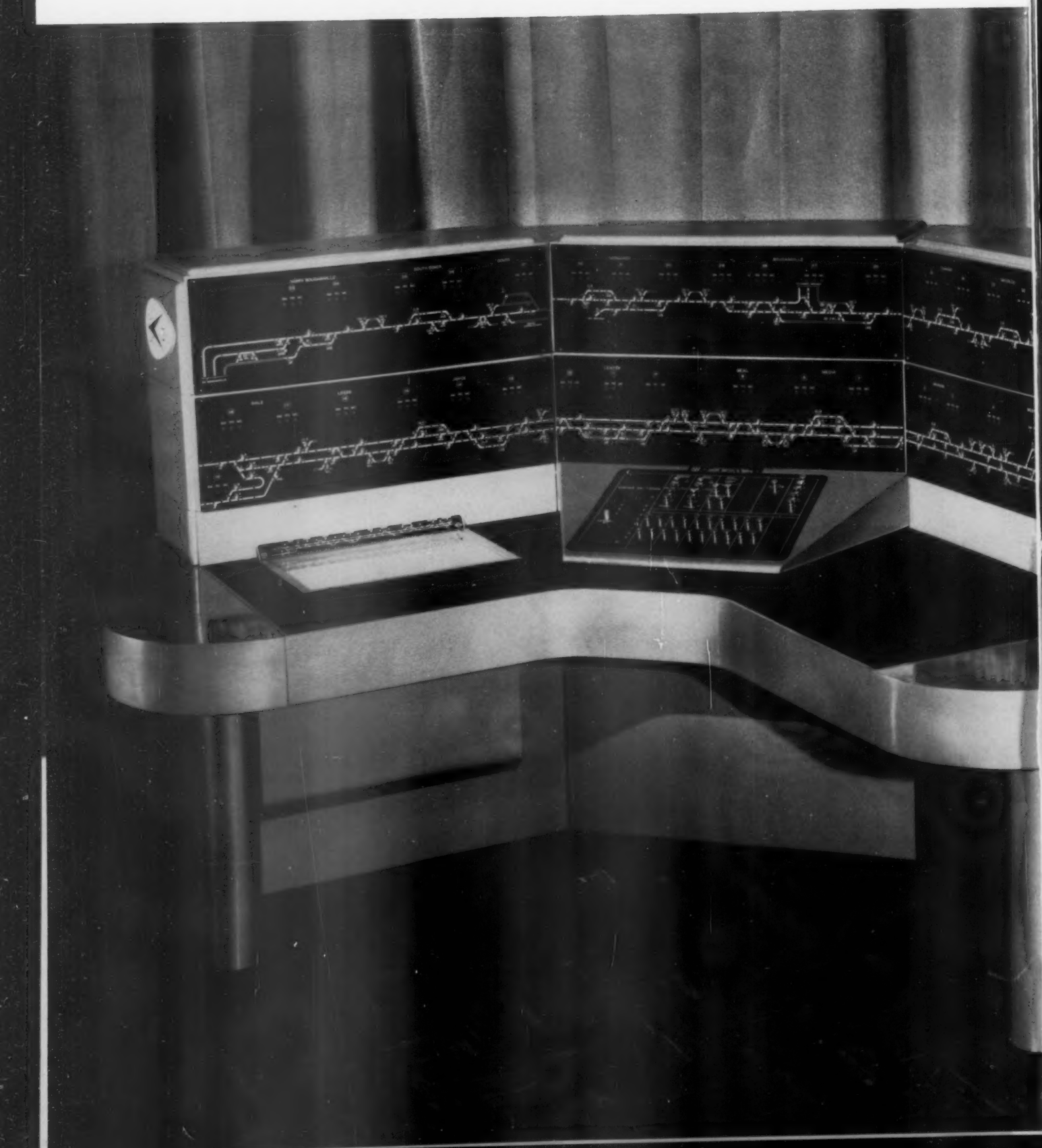
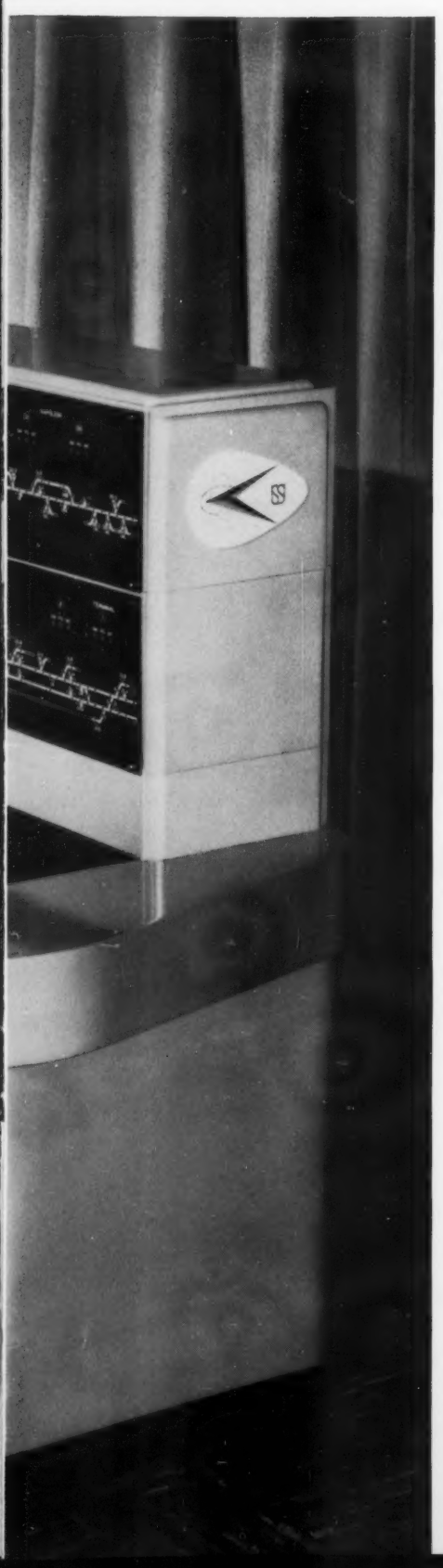
A totally new concept in control machine design...

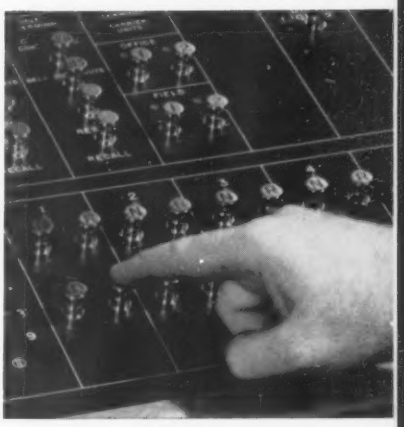
New traffic control center . . . puts



dispatcner within arms length of any point on your system



UNION SWITCH & SIGNAL has pioneered the application of push-button science to railroad operations. Now it makes another major contribution to lower railroading costs. It introduces a completely new idea in traffic control—an idea that will enable you to further centralize control of your railroad and extend the economies of CTC over larger territories, at minimum cost. Key to these benefits is a new *miniature* control panel that enables just one man to control an entire railroad *without moving his chair!*



Smaller

With a miniature track diagram and modular construction, this new UNION traffic control panel is less than half the size of conventional panels. The basic unit, shown in the photograph, occupies a floor space only 4′ 8″ by 8′ 11″, yet it does the job of a conventional panel 35 feet long!

Simpler

All control levers and buttons have been removed from the frontplate of the panel. They now are concentrated in a small operating console directly in front of the dispatcher. This gives him true *finger-tip* control of any point in his territory. It simplifies his job . . . enables him to work at higher efficiency and to keep careful watch over larger territories.

More versatile

Any size panel is built up of identical modular plug-connected sections. A basic unit can be expanded easily at any time. This new control center can be applied to all types of interlockings, as well as to CTC; it can be used with any existing control system.

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COMPLETE INFORMATION AVAILABLE. You know the benefits of CTC You know how it makes single track do the job of double track . . . how it speeds traffic and keeps schedules reliable . . . how it pays for itself in 3 or 4 years. Now, learn how this new UNION Control Center will enable you to magnify these advantages. Get in touch with a Union Switch & Signal representative today.

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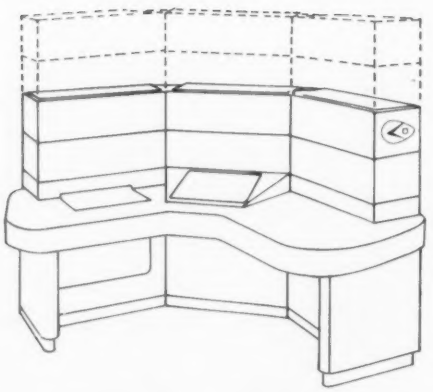
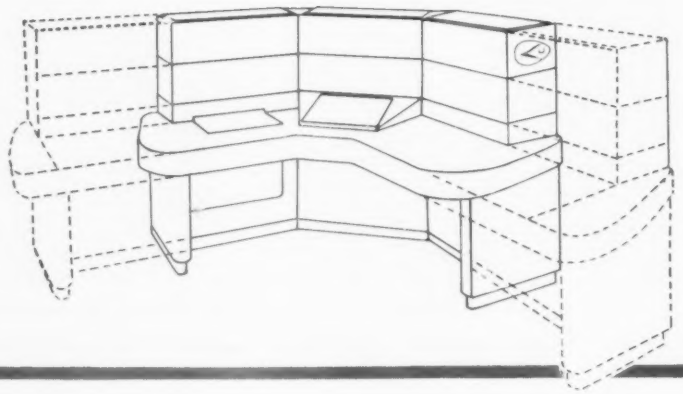
NEW YORK . . . . . PITTSBURGH . . . . . CHICAGO . . . . . SAN FRANCISCO

Flexibility of new UNION Traffic Control Center can save you money

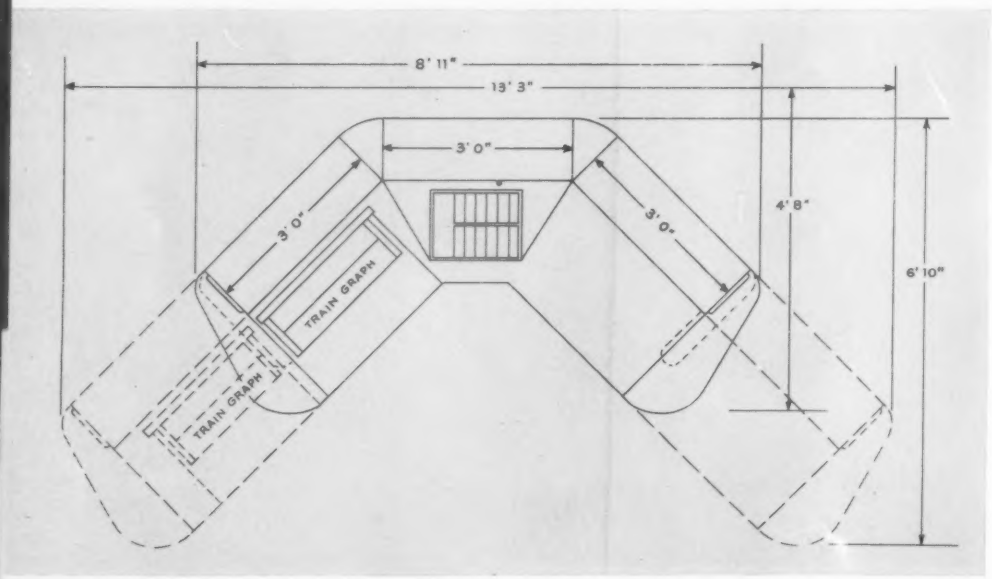


Stack 'em up. Miniature track-diagram units—only 3 feet long—can be tiered to conserve space and to permit one-man control of large territories. A three-high arrangement is practically at eye-level, and even a four-high installation is feasible.



String 'em out. The desk, as well as the track diagram, is modular. The basic unit is a 3-section assembly, but this can be expanded easily by adding modular units.

Put a whole railroad in a room only 12′ x 20′



(and have space left over!)

Here is a typical layout of the new UNION Traffic Control Center. The territory controlled is limited only by the operator's ability to handle the traffic. Its equivalent in a conventional panel would be 55′ long and would have hundreds of switch and signal levers.

CALL the nearest Union Switch & Signal office for full details.

"Pioneers in Push-Button Science"

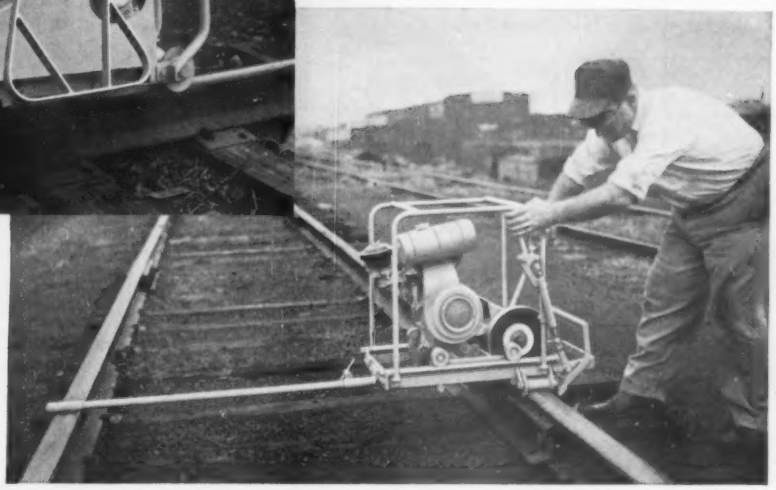
UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE, PENNSYLVANIA

NEW YORK.....PITTSBURGH.....CHICAGO.....SAN FRANCISCO

MODEL P-45-A PORTABLE RAIL SURFACE GRINDER: Powered by 4-cycle, air-cooled gasoline engine developing 7½ hp at 2600 rpm. Adjustable V-belt drive acts as overload release.



MODEL X-60 PORTABLE CROSS GRINDER. Powered by 4-cycle, air-cooled gasoline engine developing 3.4 hp. Hand-actuated lock control lever allows easy alignment with rail joint.

Do Your One-Man Jobs Faster with Low Cost RTW Grinders

These light weight, portable grinders are ideally fitted to your one-man rail end joint grinding jobs. They do the job faster, with less operator fatigue. Vibration is reduced to a minimum because the engines are mounted on rubber bushings. Designed for long life at low initial and operating cost, they give greater accuracy in performance with a minimum of skill and effort. Their portability makes them especially useful for maintenance work in heavy traffic areas.

Model P-45-A, a cup wheel grinder, is mainly used for grinding welded rail ends and for removing mill tolerance and mill scale before heat treating rail ends. It leaves a very smooth and highly polished surface.

Model X-60, cross grinder or slotting machine, quickly removes overflowed metal at rail points. It is also used with out-of-face rail end welding crews and for cross grinding rail ends behind the crews.

RTW Grinders are designed and engineered by specialists in track maintenance equipment.

Write today for complete details.

Railway Track-work Co.

3207 KENSINGTON AVE., PHILADELPHIA 34, PA.

TRACK MAINTENANCE MACHINERY

Rail Grinders	Ballast Extruders
Switch Grinders	Bit Sharpeners
Cross Grinders	Tie Nippers
Surface Grinders	Grinding Wheels
Rail Drills	Cut-off Wheels
Cross Cutters	Tie Handlers

Track Liners

MORE SERVICE!

MORE SAFETY!

MORE SAVINGS!

with

Streamlite HAIRINSUL

6 MAJOR REASONS WHY LEADING REFRIGERATOR CAR LINES SPECIFY *Streamlite* HAIRINSUL

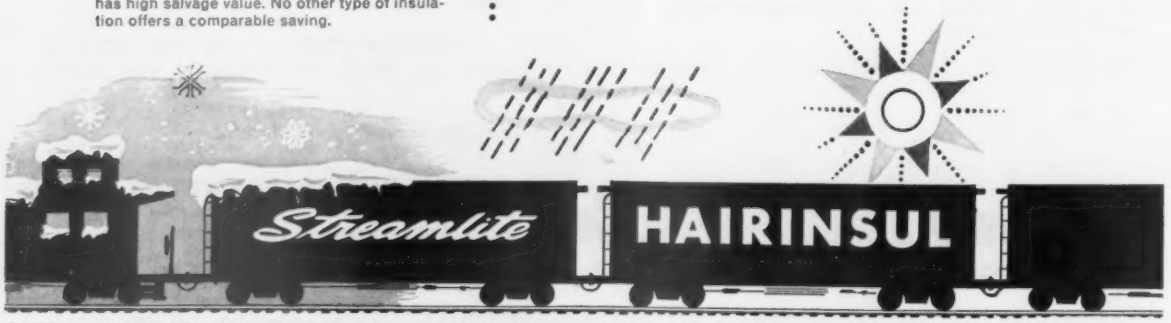
1. **LOW CONDUCTIVITY.** Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.
2. **LIGHT WEIGHT.** Advanced processing methods reduce weight of Streamlite Hairinsul by 40%.
3. **PERMANENT.** Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.
4. **EASY TO INSTALL.** Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.
5. **COMPLETE RANGE.** Streamlite Hairinsul is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other specified coverings are available.
6. **HIGH SALVAGE VALUE.** The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

MORE SERVICE because refrigerator cars protected by Streamlite HAIRINSUL are never taken out of service to repair or replace insulation. HAIRINSUL is an installation that lasts the life of the car.

MORE SAFETY because HAIRINSUL's efficiency is your best insurance against the vagaries of weather and against unexpected delays en route.

MORE SAVINGS because of Streamlite HAIRINSUL's ease of installation, long life and high salvage value.

AMERICAN HAIR & FELT COMPANY
Merchandise Mart • Chicago 54, Illinois



SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED

Real down-to-earth

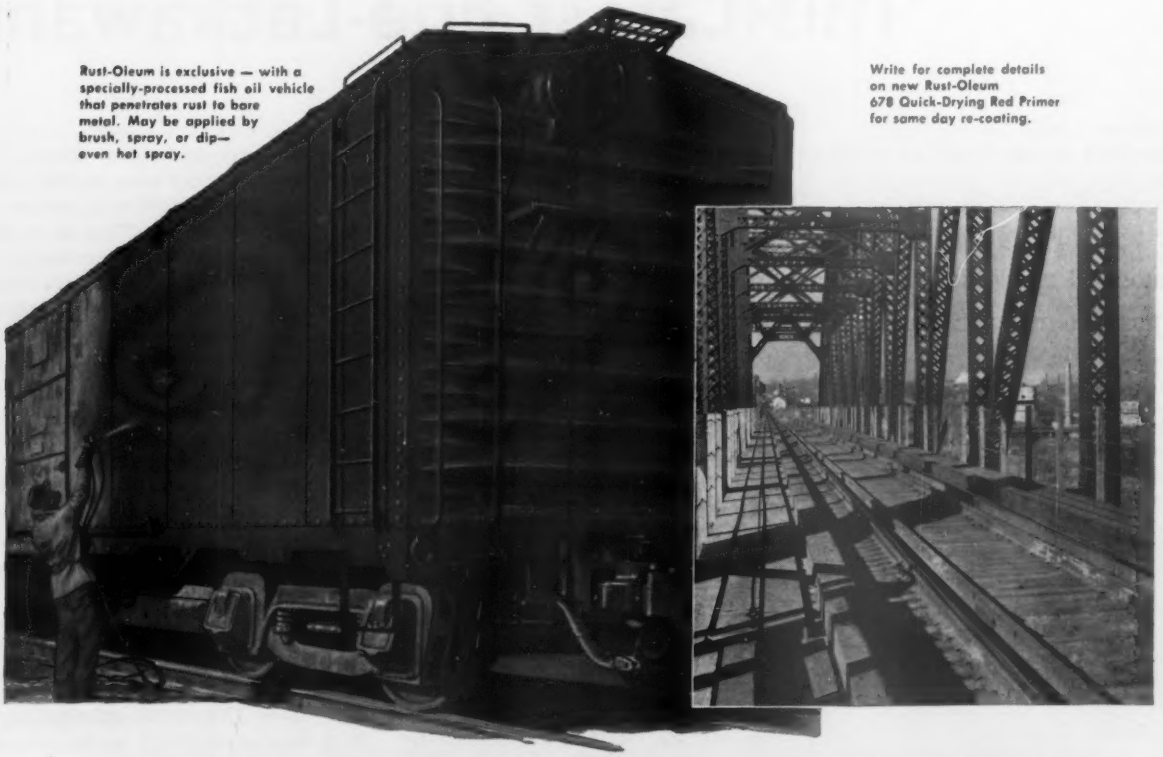
ECONOMY

Immediate Savings are yours with Rust-Oleum, because Rust-Oleum 769 Damp-Proof Red Primer may be applied directly over sound rusted surfaces after simple scraping and wirebrushing to remove rust scale and loose rust. Specially-processed fish oil vehicle *penetrates* rust to bare metal, as *proved* by Battelle Memorial Institute technologists. This usually eliminates sandblasting, flame-cleaning, and other costly surface preparations, enabling one man to do the work of two or more.

Over-the-Years Economy is yours because Rust-Oleum lasts and lasts — stands up against fumes, heat, smoke, sun, moisture, steam, and weathering to provide lasting beauty on bridges, towers, tanks, rolling stock, signaling equipment, etc. Try it . . . *see for yourself* how Rust-Oleum *Stops Rust* and beautifies as it protects in many attractive railroad finishes, including red, black, gray, green, white, aluminum, blue, yellow, and many others. Attach the coupon to your letterhead and mail it today for free test sample.

Rust-Oleum is exclusive — with a specially-processed fish oil vehicle that penetrates rust to bare metal. May be applied by brush, spray, or dip—even hot spray.

Write for complete details on new Rust-Oleum 678 Quick-Drying Red Primer for same day re-coating.



RUST-OLEUM®

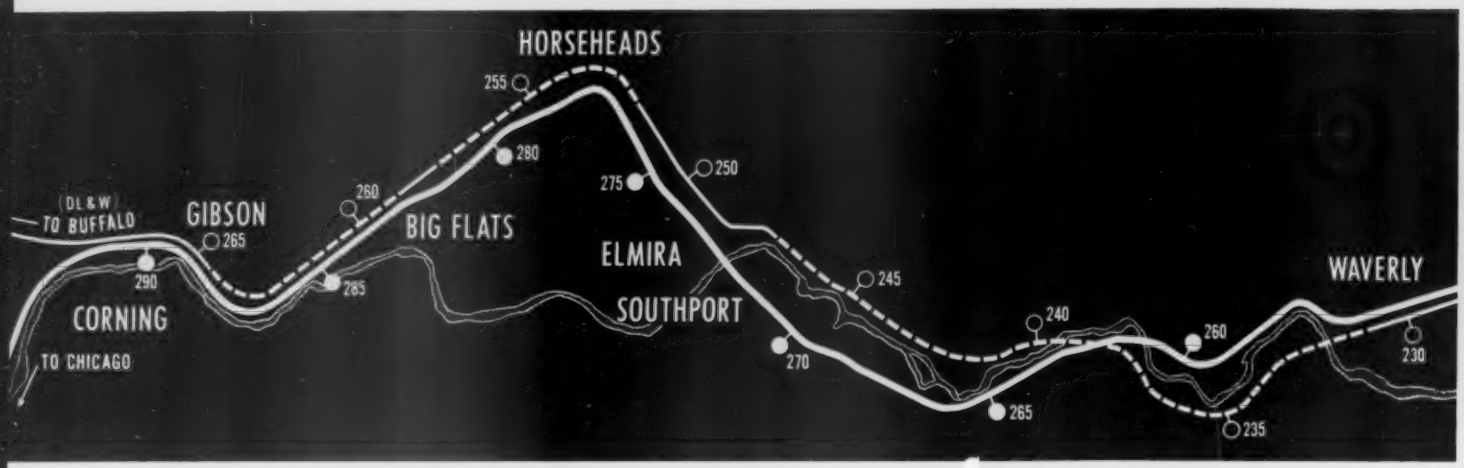
Distinctive as your own fingerprint. Accept no substitute.

STOPS RUST!®

ATTACH TO YOUR LETTERHEAD
SEND FOR FREE TEST SAMPLE

Rust-Oleum Corporation
2659 Oakton Street
Evanston, Illinois

Gentlemen: At no cost or obligation please send me a free test sample of Rust-Oleum 769 Damp-Proof Red Primer to be applied over rusted surfaces.



This Latest Erie-Lackawanna

The two roads look to a 66.8% return on their $1,630,000 coordination project. Lacking only ICC go-ahead, the 76-mile joint trackage job could be completed with maybe less than six months' work. It's been planned with a constant eye on the possible merger of the two roads—to hold down later expenses.

On February 28, the Interstate Commerce Commission's public hearings on the Erie-Lackawanna coordination plans for western New York were concluded.

Opposition was voiced at the hearings but the roads remain confident that their basic proposals, at least, will win the ICC's green light.

Several factors dictate the railroads' optimistic outlook. Chief among these, perhaps, are the clear cut advantages the plan offers to the railroads. Additionally, there are such facts as these:

Only two shippers (lumber dealers who rarely used the railroads and don't object to the plan) will be deprived of rail service.

All new industries located on the coordinated trackage in the future will be given two-road service.

Forty acres of choice real estate in Elmira becomes available for industrial development. This results from the proposed elimination of the DL&W yard there.

The Erie and the Lackawanna each has a double track main line between Binghamton and Corning. What's contemplated by the two roads is that they would both operate on one double-track line over this stretch.

The project calls for joint use of 1.7 miles of Lackawanna tracks through Binghamton, and joint use of 76 miles of Erie tracks between "BD" tower at Binghamton and Gibson, which is two miles east of Corning. During heavy business periods the daily traffic on this territory includes six Erie and eight DL&W passenger trains, and an average of 25 Erie and 23 DL&W freight trains, totaling 62 trains.

Trains of both roads will use the present Lackawanna passenger station in Binghamton, and the Erie stations in the remainder of the territory, including Elmira, and up to but not including Corning. The plan calls for joint passenger switching and car inspection at Binghamton, and joint yard operations at Waverly and Elmira, including joint locomotive and car department functions at these two points.

Track to Be Removed

This project involves the removal of 18 miles of one main and 54 miles of double main of the Lackawanna track. To give freight service to Nichols and to Vestal, one existing Lackawanna track will be left in service on 11 miles between Waverly and Nichols, and on seven miles between Vestal and Binghamton. One DL&W track is to be retained between Elmira and Horsehead, about 5.2 miles, to serve industries. Also, the DL&W will continue to serve industries at Big Flats on existing trackage, by means of a connection to the Erie tracks at that point. Both Lackawanna main tracks will be removed between Nichols and Vestal, 20 miles, as well as on the 34 miles between Waverly and Gibson, totaling 54 miles.

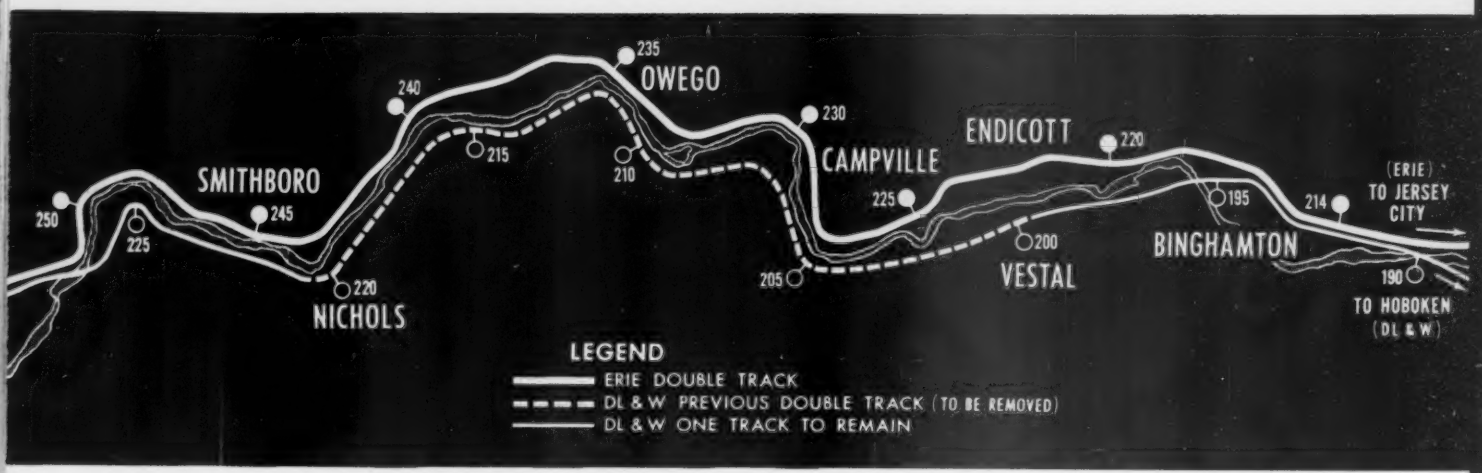
Annual recurring savings in maintenance are estimated at $800,000. Another $277,139 should be saved each year in switching and locomotive expenses. Deduct various related items such as overtime because of traffic, and increased costs at Binghamton Yard because of reduced facilities at Elmira, and you still have a net decrease of $160,480. In the category of station expense the estimated annual recurring saving is $130,374. Thus the grand total of recurring annual savings is roughly $1,090,000. This overall estimated saving is at the rate of 66.8% on the estimated cost of $1,630,000 for changes and new facilities including signaling, interlocking and new communications systems.

How Costs Are Split

The Lackawanna-Erie coordination is based, as one officer said, on an agreement which gets away from traditional cost divisions.

"There's no breakdown on costs for tissue paper and erasers," he pointed out.

Real estate taxes on the remaining trackage are to be split on a gross-ton-mile basis —which works out very close to a 50-50 split. The same system is applied to major expense items like track maintenance.



Joint Project Is Ready to Go

Station expenses are determined on a different basis, roughly according to present use of particular facilities. Switching costs at Elmira and Waverly, as an example of another departure, are based on the number of cars dispatched at those points.

In addition to cost savings, the prime mover in the coordination, the Lackawanna anticipates that it may realize some reduction of train delays because of the elimination of the Elmira yard.

However, some slight congestion problems result in the traffic movement as planned. This would mean adjustment of several passenger schedules where trains run too close now; it also means an additional overtime expense to the Erie in clearing trains.

It's to be noted, though, that a study of possible passenger train consolidations is continuing.

Everything about the coordination project has been worked out as much as possible to pave the way for the eventual merger of the two roads as is being studied.

The whole coordination, it's stressed, is "fully compatible with the merger idea."

On this 76 miles of the present Erie double track, automatic signaling is arranged for right-hand running, the blocks being about 1.5 miles long. Passing sidings are located at Endicott, Campville, Owego, Waverly and Elmira. New switch and crossover layouts, including interlocking connections, are to be constructed at the junctions at Binghamton and Gibson.

The controls for interlocking connections at West Binghamton, and the controls for interlocking connections at Liberty Street will be consolidated into the present "BD" interlocker, east of the Binghamton station. The track arrangement will provide movement for Erie passenger trains to and from the present DL&W passenger station, and for movement of DL&W passenger and freight trains to and from the jointly used Erie tracks.

At Gibson, the new interlocked crossover track arrangement will provide a direct connection from Erie main tracks to DL&W main tracks. Interlocking and signaling at this point are to be code controlled from Hornell, N.Y.

Present track and signal arrangements at "VO", 1.25 miles west of Elmira, will be rearranged and extended west approximately 3,000 ft, and become new interlocking. Connections here will consist of a facing-point crossover from the present Erie westward main to present eastward main, and a trailing point crossover from the present eastward main to westward main, and a facing-point turnout in eastward main to the passing track, with signaling as required, all code controlled from present Fifth Street interlocking, Elmira.

SPLIT BY RIVERS (the Chemung and Susquehanna), the two roads parallel each other throughout much of southwestern New York State. Shown here is Erie's main line.

How the 'Q' Built a Yard with a

Space, or the lack of it, was probably the biggest problem the Burlington faced in modernizing Cicero yard. With all 200 acres of suitable land crammed into a built-up area, and operations at the old yard continuing, it presented a real challenge.

Cicero Yard, the Burlington's third hump facility, is much like many other modern classification layouts throughout the country. It's the first "Q" yard to use Union Switch & Signal's "Velac" automatic classification system.

The road will soon hook this yard into its communications network so pre-programmed switching instructions on incoming traffic can be fed directly into the switching control system.

When the Burlington started to modernize Cicero, the first project was to move the three-track main line bisecting the old yard. The tracks were relocated around the north side of the yard. A new Clyde passenger station was built.

Working with a few tracks at a time to keep traffic moving, the Burlington forces built these components:

A 16-foot hump with inspection pit, journal oiling station, and master retarder; a six-group, 43-track classification yard for 1,240 cars; a 1,386-car capacity receiving yard; eastbound, westbound and storage yards—total capacity 1,626 cars; and auxiliary facilities—cleaning, repair, grain inspection and waycar tracks, and six major yard buildings.

Still to be completed are a large freight house and tracks for LCL freight—and a new Burlington Truck Lines garage.

Rapid Handling Is the Keynote

The new freight house is similar to one completed adjacent to the yard in 1955. An innovation will be ramps and tunnels to carry the dragline from platform to platform beneath the house tracks. Result: the dragline keeps running while the house is switched.

Primary objective of the new yard is to get freight moving faster and with greater efficiency. Tying in with this is the road's large scale CTC installation project in the Chicago area.

All three main tracks from downtown to east of Aurora are being revised to permit operation on signal indication in either direction. The dispatcher who controls the territory—which includes both ends of the Cicero Yard—is located in the division office in the freight house built in 1955.

Electropneumatic switch machines have been installed on Cicero's receiving yard lead track so that trains won't have to stop on the main line while the brakeman "opens the gate." Power turnouts are located where the class yard tapers down to a pair of tail tracks. Controlled from a tower, these turnouts are under the supervision of a new job category on the "Q"—tower switchtender.

The Burlington's Already Benefiting

The new yard is nearly complete. Its effects on the road's freight business are seen in 3½-hour faster car handling, reduced damage to lading, and consolidation of foreign line interchanges.

Most of the Western Avenue Yard, former foreign-line delivery point, has been closed. Indiana Harbor Belt pickups by outbound Burlington trains have been reduced.

The Classification Setup

The road claims a "first" in that the consist of outbound trains are recorded on punched cards and transmitted automatically to the destination point. Also, Cicero Yard features the first system for measuring wind resistance in the class yard "bowl."

This information, and other data like car weight, track curva-

YARDMASTER at Cicero commands a tower-top view of 43-track classification yard.

CICERO'S HUMP can classify cars at 1,000-per-trick rate. Tracks are arranged in six groups.

Shoehorn

ture and grades, and class track fullness are all computed in the Velac system. It's reported able to hold actual coupling speeds within one-tenth of the ideal to reduce impact.

The bright side of the picture—the factor that made the new yard worthwhile despite the problems encountered—is this:

The Burlington is looking forward to operating savings which are expected to give it a 10% return, after taxes, on the $4 million Cicero investment.

Technical Aspects of the Yard

CONVERSION: Old yard contained 89.9 track miles, 453 turnouts. New yard has 93.2 track miles, 383 turnouts, 12 lap turnouts, four slip switches.

GRADING: Total of 150,000 cubic yards of materials was excavated. Of this, 70,000 was suitable for the hump enbankment; 100,000 more came from the excavation for Chicago's Congress Street Expressway.

DRAINAGE: 36,000 feet of perforated, corrugated metal pipe does the job.

TRACK: Rails from apex of hump to clearance point of classification tracks are 129-pound section of Burlington design. Other yard tracks consist of relay rail ranging in weight from 90-pound to 112-pound. Slag ballast is used almost exclusively.

HUMP GRADE: 4.36% from crest to master retarder; 1.03% through group retarders; 0.13% in classification yard.

BUILDINGS: Six new ones, concrete foundation, structural steel frame. Walls are masonry with face-brick exterior. Main rooms are glazed tile, others are hard-surfaced masonry units. No plaster; a minimum of paint.

LIGHTING: 16 floodlight towers for the yard.

COMMUNICATIONS: No paging speakers. Other facilities standard—radio, hump signals, Teletype, telephone, pneumatic tubes, talk-back speakers.

HEMMED IN by streets and industries, the new yard presented more than usual transition problems for the Burlington's construction engineers.

INSPECTION PIT gives car checker a worm's-eye view of the underframe and car truck.

RETARDERS are electro-pneumatic. They squeeze car wheels to produce light-impact coupling.

NABISCO

Performance Proof No. 109

Compartmentizer

THESE SHIPPER-CONSCIOUS CARRIERS HAVE P-S COMPARTMENTIZERS IN SERVICE OR ON ORDER TO SERVE YOU...

Baltimore & Ohio
Central of Georgia
Chicago, Burlington & Quincy
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Merchants Despatch Transportation
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Minneapolis & St. Louis
New York Central
Northern Pacific
Pennsylvania
Seaboard Air Line
Southern Pacific
St. Louis Southwestern
Texas & Pacific
Western Pacific

Loading—With the Compartmentizer, lading protection is as simple and easy as closing your own front door. When one car-end load is in place Gates are moved up to the load, swung closed and locked against the load face. It's that easy to get complete protection.

Loading—This loading view at the Nabisco plant in Chicago demonstrates Compartmentizer versatility. The ends of this Southern Pacific car have been loaded, now the doorway area—serving as a third lading compartment—is loaded. Loads are separated by product or consignee.

coddles cookies for Nabisco

Fresh bakery products travel 1120 miles over 5 roads—not a crumbled cooky in the carload!

This National Biscuit Company carload shipment from Chicago to Houston confirmed the lading protection abilities of the P-S Compartmentizer.

Five service-conscious railroads handled the load: Belt Railway of Chicago, the I.C., Cotton Belt, Southern Pacific and Houston Belt and Terminal. The shipment moved through 1120 miles of high-speed rail travel, and the jolts of train makeup. Yet on arrival at the Houston warehouse of Nabisco not a single carton was dented, not a cooky crumbled—thanks to the full-time protection of P-S Compartmentizer.

It is performance like this that proves the P-S Compartmentizer as the most versatile lading protection product in the market. Whether carload or L.C.L., single destination or stop-off lading, the Compartmentizer has the built-in versatility to safeguard it with the greatest economy, efficiency and speed. And whatever the nature of your product—light, as a load of cookies or heavy, like the hard-to-handle weight of a load of tin plate—the Compartmentizer gives positive protection.

For more performance-proof of the lading protection abilities of the P-S Compartmentizer, write to Pullman-Standard. You'll get an immediate reply.

WORLD'S LARGEST CARBUILDER

PULLMAN-STANDARD

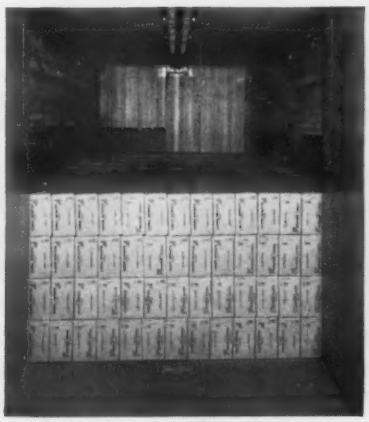
CAR MANUFACTURING COMPANY

SUBSIDIARY OF PULLMAN INCORPORATED

221 NORTH LASALLE STREET, CHICAGO 1, ILLINOIS

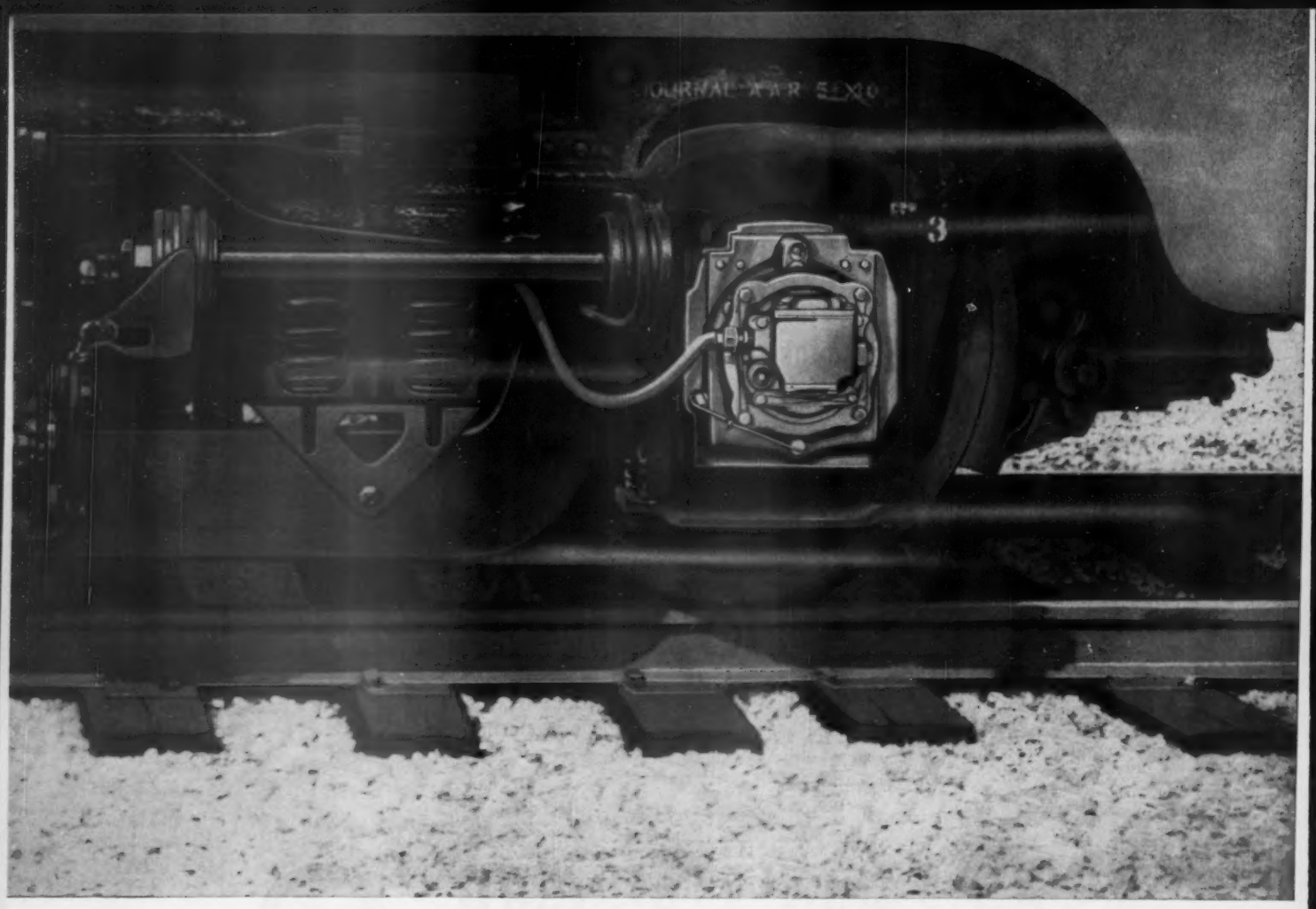
BIRMINGHAM, PITTSBURGH, NEW YORK, SAN FRANCISCO

Arrival—At Houston the car was opened. This view of the doorway load reveals a high-profit load. No space is wasted . . . no costly and time-consuming bracing or blocking is necessary. You get a tight load—a profitable load every time with the Pullman-Standard Compartmentizer.



Arrival—Here one set of Compartmentizer Gates have been opened to begin unloading operations of one car end. Notice that not a single carton is out of line—not one was damaged. Consignees appreciate this kind of service—products are delivered ready for resale or immediate use.

Arrival—In Compartmentizer-equipped cars, loading and unloading operations are fast and economical. Compartmentizer Gates stand flush against the car side wall—crews work unhampered by loose, awkward parts. Full use can be made of mechanical handling equipment.



Keeping Wheels Turning Cuts RE-Turning!

Turning Wheels are *earning* wheels. When they're rolling on the track, they're playing their part in paying a return on the money invested in the equipment. When they're being RE-turned, it's a costly, time-consuming operation.

There's a practical way to keep wheels *off* the lathes and *on* the tracks . . . with the Westinghouse AP Mechanical-Pneumatic Decelostat® Controller. At the first hint of a slip, the Decelostat Controller momentarily relieves braking pressure . . . permitting wheels to regain train speed . . . then, braking pressure is immediately built up to train level.

Because braking pressure is relieved the instant wheel slip *starts* . . . the slip is arrested *before it can* develop into a *slide* . . . and you save the cost of many flat wheels.

Westinghouse AP
MECHANICAL PNEUMATIC
Decelostat® Controller

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.

CF&I contributes to railroad progress

Guided by a sincere desire to meet and anticipate the ever-changing demands of progress, CF&I has, through the years, closely cooperated with the western railroads in the development of new and improved rails and track accessories.

Recently, CF&I has introduced three new rail sections, the 106, 119 and 136 lb. These new improved sections were developed with present-day needs and conditions in mind... track betterment... safety... economy. These designs embody a combination of effective engineering features approved and accepted by prominent railroad engineers. Performance has proven the superior characteristics of these designs, justifying the recognition afforded them.

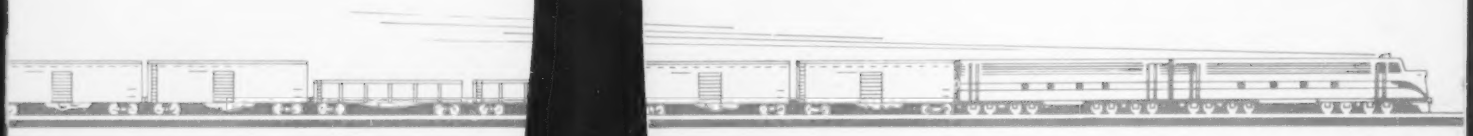
Past achievements of CF&I and the railroad industry have been a constant inspiration toward greater accomplishments, continuous development and dependable service.

PROPERTIES OF SECTIONS

ITEM	SECTIONS		COMPARISON OF 100 RE TO CF&I 1060	
	100 RE	CF&I 1060		
AREA: HEAD	3.80 Sq. In.	4.00 Sq. In.	+ 5.3%	
WEB	2.25 Sq. In.	2.50 Sq. In.	+ 11.1%	
BASE	3.90 Sq. In.	3.95 Sq. In.	+ 1.3%	
TOTAL	9.95 Sq. In.	10.45 Sq. In.	+ 5.0%	
Weight per yard	101.5 lbs.	106.6 lbs.	+ 5.0%	
G.T./mile — single track	159.50	167.5	+ 5.0%	
N.T./mile — single track	178.64	187.6	+ 5.0%	
Moment of Inertia (I)	49.00	53.6	+ 4.6"^{4}	+ 9.4%
Section Modulus, Head	15.1	16.1	+ 1.0"^{3}	+ 6.6%
Section Modulus, Base	17.8	18.8	+ 1.0"^{3}	+ 5.6%
Ratio, "I" to Area	4.9	5.1	+ 0.2	+ 4.1%
Ratio, Section Modulus to Head Area	1.5	1.5	SAME	
Distance, Base to N.A.	2.75"	2.85"	+ 0.10"	

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

	psi	
106 CF&I	18,700	
100 RE	27,300	46%



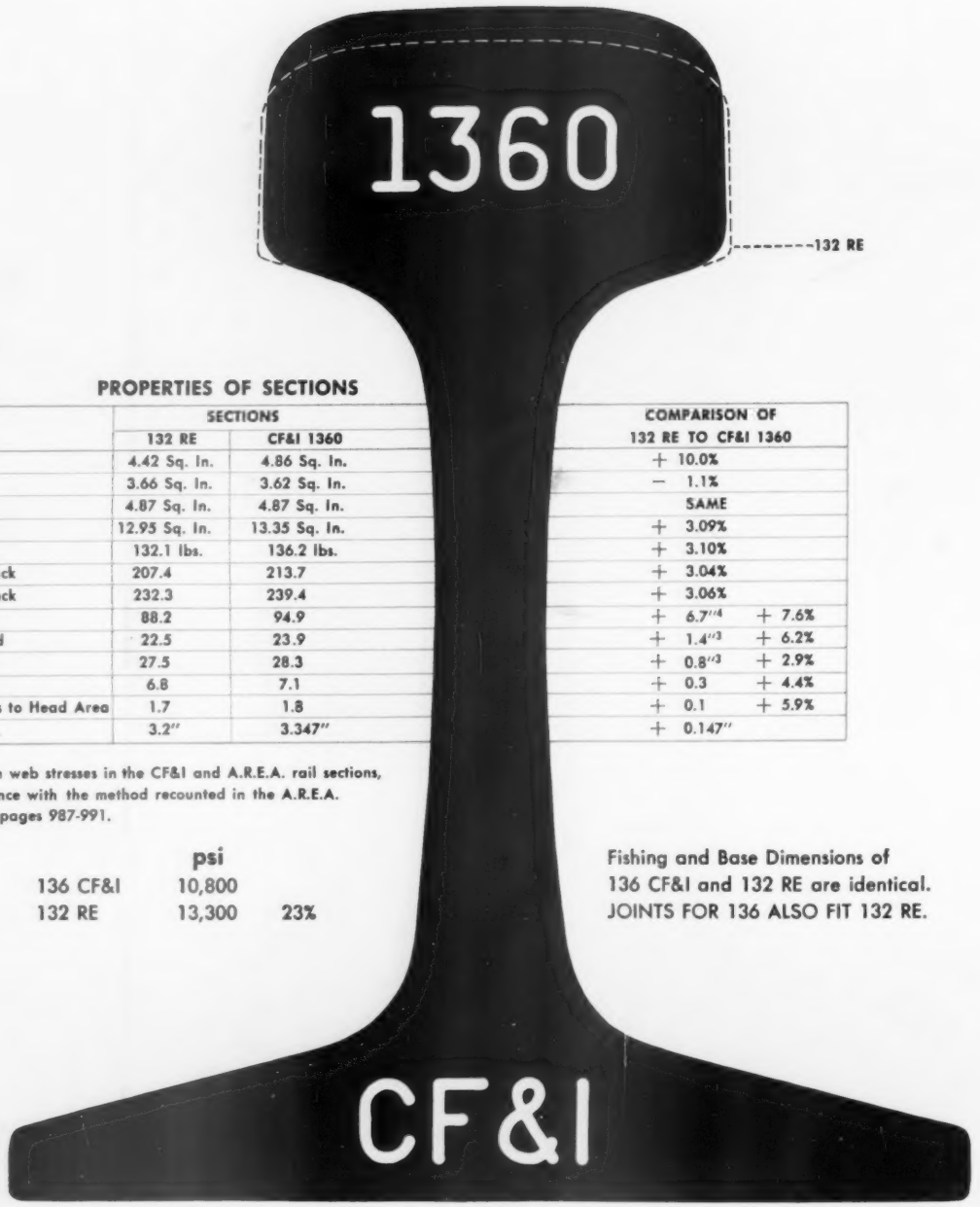
Fishing and Base Dimensions of
119 CF&I and 115 RE are identical.
JOINTS FOR 119 ALSO FIT 115 RE.

PROPERTIES OF SECTIONS

ITEM	SECTIONS		COMPARISON OF 115 RE TO CF&I 1190.	
	115 RE	CF&I 1190		
AREA: HEAD	3.91 Sq. In.	4.32 Sq. In.	+ 10.5%	
WEB	3.05 Sq. In.	3.04 Sq. In.	− 0.3%	
BASE	4.29 Sq. In.	4.29 Sq. In.	SAME	
TOTAL	11.25 Sq. In.	11.65 Sq. In.	+ 3.6%	
Weight per yard	114.7 lbs.	118.8 lbs.	+ 3.6%	
G.T./mile — single track	180.7	187.0	+ 3.5%	
N.T./mile — single track	202.4	209.4	+ 3.5%	
Moment of Inertia (I)	65.6	71.4	+ $5.8''^4$	+ 8.8%
Section Modulus, Head	18.0	19.4	+ $1.4''^3$	+ 7.8%
Section Modulus, Base	22.0	22.9	+ $0.9''^3$	+ 4.1%
Ratio, "I" to Area	5.83	6.13	+ 0.3	+ 5.1%
Ratio, Section Modulus to Head Area	1.6	1.7	+ 0.1	+ 6.3%
Distance, Base to N.A.	2.98"	3.124"	+ 0.144"	

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

	psi	
119 CF&I	13,400	
115 RE	15,200	13%



PROPERTIES OF SECTIONS

ITEM	SECTIONS 132 RE	SECTIONS CF&I 1360	COMPARISON OF 132 RE TO CF&I 1360	
AREA: HEAD	4.42 Sq. In.	4.86 Sq. In.	+ 10.0%	
WEB	3.66 Sq. In.	3.62 Sq. In.	− 1.1%	
BASE	4.87 Sq. In.	4.87 Sq. In.	SAME	
TOTAL	12.95 Sq. In.	13.35 Sq. In.	+ 3.09%	
Weight per yard	132.1 lbs.	136.2 lbs.	+ 3.10%	
G.T./mile — single track	207.4	213.7	+ 3.04%	
N.T./mile — single track	232.3	239.4	+ 3.06%	
Moment of Inertia (I)	88.2	94.9	+ 6.7″⁴	+ 7.6%
Section Modulus, Head	22.5	23.9	+ 1.4″³	+ 6.2%
Section Modulus, Base	27.5	28.3	+ 0.8″³	+ 2.9%
Ratio, "I" to Area	6.8	7.1	+ 0.3	+ 4.4%
Ratio, Section Modulus to Head Area	1.7	1.8	+ 0.1	+ 5.9%
Distance, Base to N.A.	3.2″	3.347″	+ 0.147″	

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

	psi	
136 CF&I	10,800	
132 RE	13,300	23%

Fishing and Base Dimensions of 136 CF&I and 132 RE are identical. JOINTS FOR 136 ALSO FIT 132 RE.

COMPARISON OF THREE CF&I SECTIONS RELATIVE TO A. R. E. A. SECTIONS BASED ON ACTUAL SIZE.

THE COLORADO FUEL AND IRON CORPORATION

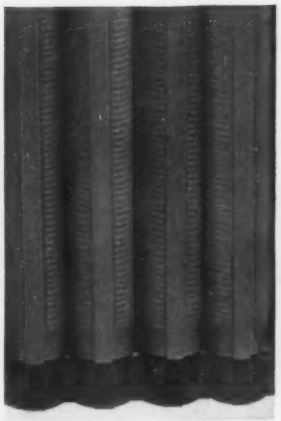
Denver, Colorado

CF&I

4049

Why Exide-Ironclad Carlighting Batteries Last Longer Even at Extreme Temperatures

Best buy in a railway carlighting battery. Exide-Ironclad, engineered to give you maximum life and dependability even under the trying conditions of railway service.



Tubular positive plate. Unique Exide-Ironclad construction. Active material is held captive inside plastic power tubes. Keeps its power for years of use.

Winter wraps a cold hand around a battery. Summer tries to drain it of life. But year after year, under all extremes of temperature, Exide-Ironclad Batteries for carlighting and air conditioning have proved that they can be depended on for power and life. This is important to you, because it is often at these extremes of temperature that a battery is most needed. The fact that Exide-Ironclad Batteries can meet your requirements under the worst temperature conditions is extra assurance of their dependability at all the more normal operating temperatures. No other battery gives you this assurance. Because no other battery has its unique tubular construction. If you want the most battery life and dependability for your dollar, specify Exide-Ironclad. For details, write Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

Exide®

BARCO Steam Heat Connections

for Locomotives and Passenger Cars

—LIGHTEST CONNECTION MADE

—ALL WELDED CONSTRUCTION

—GREATEST STEAM CAPACITY

—CHEAPEST TO MAINTAIN

—ONLY 2 MOVING POINTS

—METAL WEARING PARTS ARE HARDENED ALLOY STEEL AND CHROMIUM PLATED

THE GASKETS LAST!

STOP
UNNECESSARY EXPENSE

Available railroad records will indicate the number of steam heat connection gaskets used each season.

Barco connections only have two gaskets which last a complete heating season without replacement.

Reports from Users

Longer Service . . .
"Tests have proved that Barco Connectors withstand diesel dry steam better and give longer service. Annual removal and repairs program has proved Barco superior."

Less Maintenance . . .
"We are installing Barco connections as rapidly as possible because they require so much less maintenance."

Makes Test . . .
"We started a test of Barco Connections on our road. A year later we ordered another sixty and only one was removed in a year."

Full Year Without Attention . . .
"Barco 2½" Connections on Diesel locomotives are checked in the fall and, barring accidents, they go the full year without attention."

2 Years without Gasket Change . . .
"Barco Steam Heat Connections on our _____ streamliner have gone more than two years without a gasket change."

PRODUCTS BACKED BY EXPERIENCE
BARCO
ANNIVERSARY
1908 50TH 1958

Season-to-Season Service without Maintenance

BARCO MANUFACTURING CO.
501-D Hough St., Barrington, Illinois
In Canada: The Holden Co., Ltd., Montreal

NCG® *Announces . . .*

full acquisition of American manufacturing rights to "System Schlatter" continuous rail electric flash welder

NCG Rail Welding System makes possible . . .

- Increased continuous rail production: completed weld every four minutes including removal of burr and grinding head and base smooth.
- Higher quality welds for longer wear requiring less track maintenance: perfect hairline welds with restricted heat transmission along rail—annealing or normalizing eliminated.

NCG Rail Welding System is automatic . . .

- One man controls entire operation: positions and prepares rail for welding including electrode grinding—makes weld—removes burrs—grinds and moves welded rail to flat cars.
- Releases men for required work elsewhere.

National Cylinder Gas, a pioneer in welding, is proud to introduce this new and improved welding system to American Railroads. Continuous welded rail is proving to be an important advancement in modern railroads, and the NCG "System Schlatter" welder makes it even more practical and economical to you. First complete American made unit available May. Write Rail Welding department for particulars.

NCG®

NATIONAL CYLINDER GAS COMPANY
840 North Michigan Ave., Chicago 11, Illinois

© 1958, National Cylinder Gas Company

COMMON SIGHT

The Northern Illinois Toll Road crosses 15 railroads at 42 spots, like this intersection of the Soo Line.

ALL RIGHT SO FAR ►

Piers for Tri-State Toll Road sweep through Milwaukee's Bensenville Yard. The railroad got paid for land taken but any expansion plans may be crimped.

Crossing Costs: Smog Chased in

Traditionally as snarled as a nomad's beard, railroad-highway crossing problems were clarified on the west coast last year.

California legislators set up a three-part approach which included specific provisions for cost divisions, a special $5 million annual appropriation, and a system for giving priority to improvement programs.

Cost allocations to the railroads are now set up like this:

- Separation project which does not eliminate an existing crossing—entire cost carried by the applicant (the railroad or public body).
- Application by a public body closing a major crossing—railroad pays 10% of the cost attributable to the presence of its facilities, plus benefits capitalized at 5%.
- Application by a railroad closing a major crossing—railroad pays 90%.
- Application by a public body to widen existing separation structure—railroad pays 10%.
- Application by a railroad for similar project—railroad pays 90%.
- Where a project is not covered by the above provisions, the state PUC allocates funds.

Railroad benefits under the California code are defined as "the direct and computable savings to the railroad resulting from the elimination or reduction of the cost of physical maintenance of such crossing or crossings, and from elimination or reduction of the cost of maintaining crossing protection."

Maintenance responsibilities are left to the PUC for determination.

California's present code should prevent a repetition of a situation that arose five years ago. Two carriers were assessed then 50% of the cost of the Los Angeles crossing improvement project.

High Court Ruling

In this case, the two roads appealed to the U.S. Supreme Court, contending their share of the costs should be based on the benefits received. The high court, however, held that in the exercise of police power, the cost of improvements may be allocated entirely to the railroad.

In one western road's view, the new California setup "has proved a workable law, not only from the standpoint of the railroads but also, we believe, for state, county and municipal governments as well."

The carrier said it has always held the allocation of cost on the basis of benefit principle. And, though "this formula is not based completely on this principle, the amendment is working well. Certainly, more grade separation projects will be undertaken sooner than if the amendment had not been adopted.

"And it has ended capricious and often unjust decisions by various bodies as to what agency should bear grade crossing separation costs, as well as much of the costly and time-consuming litigation created by such decisions."

Other aspects of the new California situation may aid programming by roads in other sections of the country.

Two revisions of the state Streets and Highway Code set up the machinery.

One provides for an annual appropriation of $5,000,000 in the highway commission and department of public works budget for allocation to grade separation projects.

The second requires the PUC to list crossings of streets and roads which are

California

most urgently in need of separation.

Twenty-two projects, out of 61 proposed separations, are included in the commission's first priority list.

How did PUC go about establishing the priorities? First of all, it checked on the following points:

Location of the crossing; vehicular count in a 24-hour period; train count in the same period; type of separation proposed; cost estimate for the project, if available; funds available for the construction; and considerations of need for it.

After public hearings, the commission came up with its 22 priority projects.

In consideration of both accidents and traffic, the PUC stressed potential rather than actual, future rather than present, considerations.

California's program does not offer railroads the most advantageous liability terms. But it does present a thorough-going approach to the situation which varies widely from state to state.

One other bright spot is the provision limiting rail liability to 10% on projects financed under the Federal-Aid Highways program—with further clarification due.

BEFORE

On the ground, tracks were a long-time source of traffic congestion. City and railroad agreed: some solution was a must.

Here's One RR-City Effort That Worked

In the heart of the Winchester, Mass., shopping district, this grade crossing (above) presented the Boston & Maine a traffic problem. Vehicular problems were considerable, too. The double-track mainline was joined by a double-track branch at the crossing of Church and Main streets. Forming the sides of a V, they met at the railroad, thus complicating the crossing situation. Eight manually operated gates and a system of traffic lights protected vehicles and pedestrians. Daily rail traffic includes 64 passenger trains and 8 freights. To add to the congestion in rush hours, Winchester is a stop for many commuter trains to and from Boston. The obvious solution was a grade separation.

AFTER

Elevated, the railroad's own operations are simplified with city's benefits obvious. Rail and vehicular traffic move freely now.

It's Engineering Week at Chicago

- **NRAA exhibition opens at the Coliseum on Monday**
- **AREA Convention starts Tuesday at Sherman hotel**

RAY McBRIAN
President
American Railway Engineering Association

About the Exhibit . . .

- It's sponsored by the National Railway Appliances Association. . .
- . . . at the Coliseum, 1513 South Wabash avenue. . .
- . . . featuring displays of 113 manufacturers.
- It's open from 9 to 5, Monday through Wednesday, 9 to 1 on Thursday
- Free bus service from the Clark street entrance of the Sherman.

•

After the Convention . . .

You can visit the AAR Research Center. A guided tour will begin at the Administration Building, 3140 S. Federal street. Or, you can see facilities or tests of special interest to you. Public transport available.

•

WE'LL BE THERE TOO!

Drop in to join the Railway Age staff at the Simmons-Boardman "Coffee Bar"—8 to 10 each morning—in Parlor "O" on the mezzanine level of the hotel.—Come and meet your friends.

•

OFFICIAL PROGRAM

TUESDAY MORNING, March 11, 9:30 to 12:30—Grand Ballroom

Ray McBrian's report
Reports of Executive Secretary N. D. Howard and Treasurer A. B. Hillman.
"Research Lights the Way"— W. T. Faricy, chairman of the board, AAR.
"Teamwork in Research"—W. M. Keller, vice-president, research, AAR.
"Highlights of Engineering Division Research" (illustrated)—G. M. Magee, director of engineering research, AAR.

TUESDAY AFTERNOON, 2:00 to 5:00 —Grand Ballroom

Committee Reports
Contract Forms—"Value of Knowledge of Contracts to the Engineer"—C. J. Henry, chief engineer, Pennsylvania.
Engineering and Valuation Records
Yards and Terminals—Panel Discussion: "Hump Yards"— W. J. Hedley, chief engineer, Wabash, moderator; Martin Amoss, superintendent yards and terminals, New York Central; G. W. Miller, regional engineer, Canadian Pacific; A. L. Essman, chief signal engineer, system, Burlington.
Economics of Railway Location and Operation—"Engineering, Maintenance and Operating Benefits to Be Derived from Increased Joint Use of Railway Facilities"—J. W. Barriger, president, Pittsburgh & Lake Erie.
Waterways and Harbors
Highways—"Computer Determination of Risk Factors in Different Types of Grade Crossing Protection"— G. M. Magee.

WEDNESDAY MORNING, 9:00 to 12:00 —George Bernard Shaw Room

Reports of Committees
Water, Oil and Sanitation Services—
"Radioactivity and Railroads"—R. O. Bardwell, nuclear engineer, Denver & Rio Grande Western.
Cooperative Relations with Universities—
"One Way in Which Committee 24 Is Interesting Students in Railroading" (illustrated)—W. H. Huffman, assistant chief engineer, Chicago & North Western.
Wood Bridges and Trestles
Impact and Bridge Stresses
Masonry—"Work of the Reinforced Concrete Research Council"—R. F. Blanks, chairman Iron and Steel Structures.
"Model Railway Truss Bridge" (illustrated)—L. T. Wyly, research professor of civil engineering, Northwestern Technological Institute.
Clearances

WEDNESDAY NOON, 12:00 — Grand Ballroom

Annual Luncheon
Results of election of officers
"Maintenance—or Deferred Maintenance" —G. B. Aydelott, president, Denver & Rio Grande Western.

WEDNESDAY AFTERNOON, 2:30 to 5:05—George Bernard Shaw Room

Committee Reports; Waterproofing; Wood Preservation; Buildings
"Legislative Situation As It Affects Engineering and Maintenance of Way Departments"—R. G. May, vice-president, Operations and Maintenance Department, AAR.
Maintenance of Way Work Equipment
Economics of Railway Labor
"Observations of Track Maintenance in France and Germany" (illustrated)—T. F. Burris, chief engineer, system, C&O.
"Methods and Cost Control in Maintenance of Way Department"—M. C. Bitner, manager methods and cost control, system, Pennsylvania.
Ties

THURSDAY MORNING, 9:00 to 12:30 —Grand Ballroom

Committee Reports
Special Committee on Continuous Welded Rail—"Observations of Continuous Welded Rail in France" (illustrated)—T. F. Burris, chief engineer, system, C&O.
Rail—"Plastic Flow in Rail Heads" (illustrated)—C. J. Code, assistant chief engineer—tests, M/W, Pennsylvania.
"Rail Production and Rail Testing in Germany" (illustrated)—Kurt Kannowski, metallurgical engineer, AAR.
"Progress in Rail Research" (illustrated) —G. M. Magee.
Track; Roadway and Ballast—"Ventilation System for Cascade Tunnel on Great Northern" (illustrated)—G. V. Guerin, chief engineer, Great Northern.

One large railroad recently sprayed a bridge with Dearborn NO-OX-ID at a cost of only $15,000. It formerly cost $144,000 to paint this bridge by conventional methods. They will never paint another bridge! Are you interested in savings like this? Mail the coupon.

FOR LONG-TERM PROTECTION

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DESIGNED TO PROGRESS
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Please send information on bridge spraying with Dearborn NO-OX-ID.

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City..... *Zone*.... *State*.....

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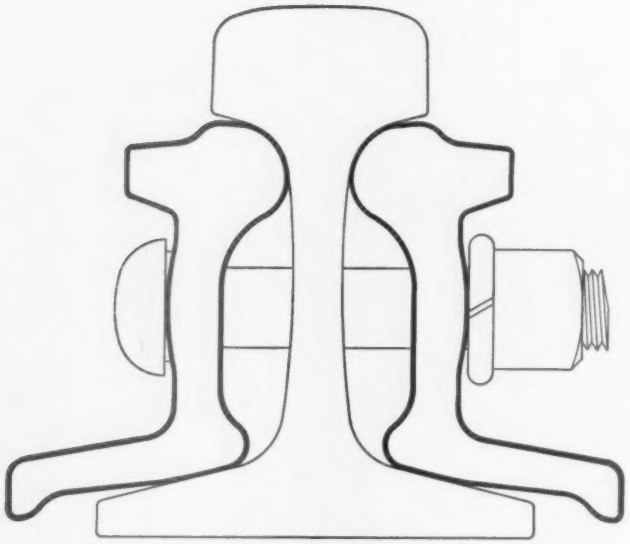


Sure

THE LATEST
IN RAIL JO

What It Is

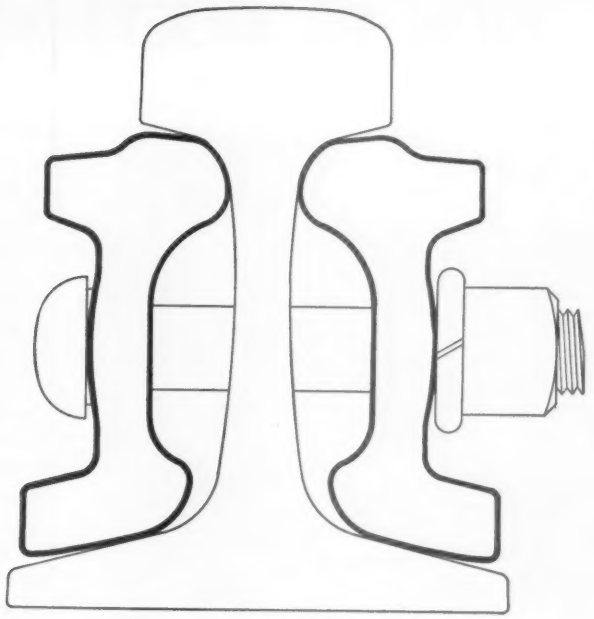
Sure-Fit is a new concept in rail joint design. Its special feature is the novel principle incorporated in the outer face of the joint bar, to obtain improved bearing between the bolt assembly and the face of the joint bars, reduce stress in the bolts, and to compel correct seating of the joint bars, thereby reducing stresses in them as well as in the rails.

Conventional joint bars now in use are designed with a flat outer face between the top and bottom flanges. By design, or because of permissible manufacturing tolerances in both rails and joint bars, or because of wear in the contact surfaces of the joint assembly, this flat outer face may assume a number of positions relative to the rail.

When the vertical flat face of a joint bar is tilted inwardly at the top, the lower edge of the bolt head takes all of the bearing pressure; when tilted outwardly the pressure is concentrated on the upper edge of the bolt head. In either position, the bolts are unduly stressed, the loss of tension results. This causes the joints to loosen, their efficiency is impaired, thereby causing excess wear at the contact surfaces with the rails.

RAIL JOINT
DIVISION OF POOR
50 CHURCH ST.

e - Fit



IMPROVEMENT

INT DESIGN

What It Does

Sure-Fit provides a rail joint with an outer face having the bolt assembly seating area, at or near the longitudinal center line of the bolt holes. This bearing zone is located outwardly beyond the remainder of the face, so that when the bolts are tightened contact is always closer to the axis of the bolts. Stresses then are not only reduced in the bolts, but this medium of bearing assures a more even distribution of pressures at all points of contact between the joint bars and the rails.

Sure-Fit provides a bearing on the outer face of the bars, which compels them to seat properly in the contact areas of the rails. This feature becomes particularly important now with the ever increasing use of rails having the larger head-web fillets. With **Sure-Fit**, bolt pressure is applied in such manner as to keep the pull of the bolts on the center line zone at all times, regardless of wear or manufacturing tolerances, thereby eliminating any tendency to cock the bars.

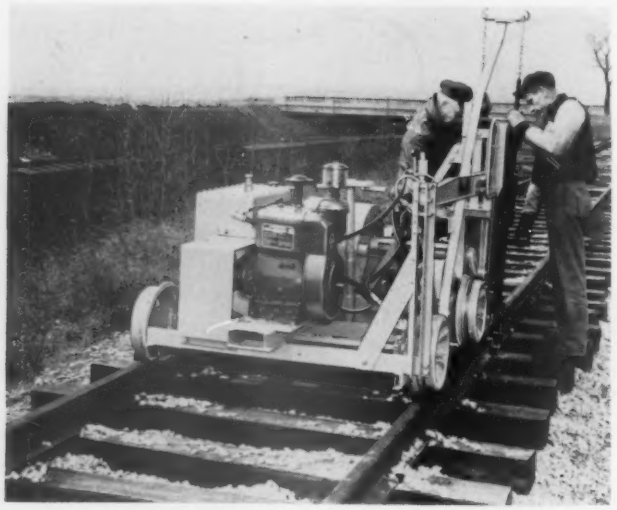
Sure-Fit is the latest and newest of the many improvements to rail joints pioneered by the Rail Joint Company over the past sixty years. Among these are Curved Base, Head Free, Center Overfill, Center Easement, Vertical Ribbing on inside face, reinforced Longitudinal Headrib. All of which have contributed to a better rail joint, offering longer life and ultimate saving to the railroads.

COMPANY

& COMPANY (INC.)

NEW YORK 7, N. Y.

NEW PRODUCTS REPORT: What's new in



STRONGER SPIKE PULLER

A larger, more-powerful engine designed to give increased productivity, greater utilization, is a new design feature of the Nordberg BP mechanical spike puller in the "Mechanical Muscles" line of track maintenance equipment. The new version of the unit also features a hydraulic-motor drive. With the new drive, the BP spike puller becomes a self-propelled machine.

According to the manufacturer, the new design makes possible greatly improved crew performance. Initial experience indicates that the production rate of a two-man crew, when using this adzer model, is approximately 50 per cent better than with earlier models. Furthermore, the simple, positive action of the improved spike puller makes it easy to pull crooked, throat-cut or badly corroded spikes from the ties. *Nordberg Manufacturing Co., Dept. RA, Milwaukee, Wis.*

CRAWLER EXCAVATOR

Koehring Division of Koehring Company has recently made available a crawler excavator adaptable to lifting and material handling functions as well. The excavator, designated Model 805, can be used as a crane, a 2- to 3-cu yard dragline, a clamshell with a capacity up to 3½ cu yd or a 2-cu yd shovel. Its versatility makes it especially useful for railroads.

The Model 805 is designed for work in cramped spaces. It is equipped with friction-type steering brakes that are spring set and air power released, making it possible for the machine to turn within its own length when one crawler is completely locked.

Design features include main clutches that have a mechanical power booster, cam action and automatic adjustment for heat expansion. *Koehring Division, Dept. RA, Koehring Co., Milwaukee 16, Wis.*

LONGER TRAILER CAMP CARS

A new series of mobile trailer-type camp cars in 28-ft lengths has been added to the Morrison Campcar line. Suitable for moving, housing or sustaining M/W crews, these trailer-type camp cars are claimed by the manufacturer to offer immediate savings in portal-to-portal pay time, travel time, food and lodging costs.

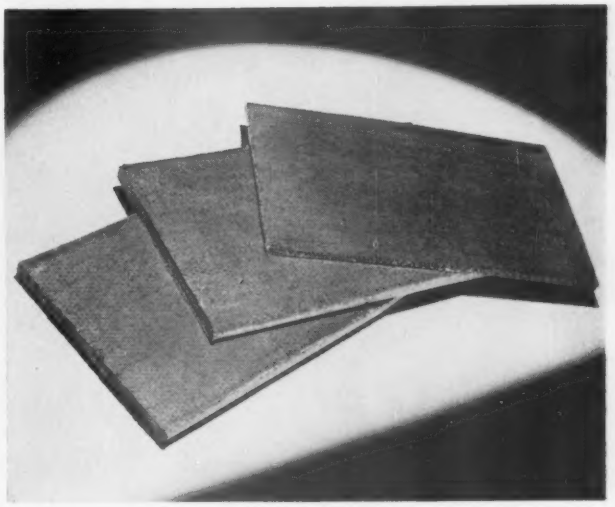
The new 28-ft trailers are available in several combinations and floor plans. Among the combinations available are: a 4-man unit, a 5-man unit (both of these are self contained and offer complete living facilities), an 8-man dormitory, and a 12-man combination kitchen, dining and recreation unit.

Currently underway on the manufacturer's drawing boards are plans for several other equipment combinations. *Morrison Railway Supply Corp., Dept. RA, P.O. Box 185—Station F, Buffalo 12, N.Y.*

engineering and maintenance of way

CONTINUED ON PAGE 43 ►

BRIDGE BEARING PADS



A new product designated J-M Bridge Bearing Pads is designed by the Johns-Manville Sales Corporation to counteract the abrasive effect of steelwork on masonry foundations of bridge structures.

The J-M Bridge Bearing Pads form a resilient, long-wearing and conformable cushion between steelwork and masonry abutments.

Specially designed for durability, the pads are in the form of rugged slabs, made of selected asbestos, special compounds and wire reinforcement. According to the manufacturer, the inorganic asbestos construction will provide long life. Special features of the pads are resistance to deterioration and the ability to withstand most kinds of chemical action, as well as long exposure to the elements. *Johns-Manville Sales Corp., Dept. RA, 22 E. 40th st., New York 16.*

ROTARY CAR DUMPER

A one-minute dumping cycle from start to finish is the claim for a new rotary car dumper. The machine, manufactured by Heyl & Patterson, is so well balanced that it is capable of dumping and returning a spotted car in that length of time, using only a 30-hp drive.

The new unit is capable of handling either hopper or gondola cars. Instead of counterweights, the dumper is equipped with two clamps arranged to hold railroad cars securely.

To make the equipment adaptable to the needs of a variety of users, optional equipment is available. The dumper can be provided with an accurate electronic scale in the dumper platten if required. Also available is a power-actuated car retarder for car spotting without riders. *Heyl & Patterson, Inc., Dept. RA, 55 Fort Pitt blvd., Pittsburgh 22, Pa.*

RAIL DETECTOR CAR

A new adaptation of the basic Hy-Rail car, fitted with a special body for serving as a rail detector car, has just been completed by Fairmont Railway Motors. Like other Hy-Rail designs, the rail detector modification uses retractable flanged wheels to convert from a highway vehicle to an on-track machine.

The basic vehicle is the Model A35 truck-chassis unit. A full-reverse transmission is provided to give the machine the same speed in reverse as in forward operation. A van-type body is provided with the vehicle. In this body railroads will install their own ultrasonic rail-testing equipment.

The result, according to the manufacturer, is a compact and flexible unit that greatly increases the utility of rail detector equipment by giving it the versatility of highway vehicles. *Fairmont Railway Motors Inc., Dept. RA, Fairmont, Minn.*

CLEAR TRACK TO COST REDUCTIONS

KOPPERS PRESSURE-TREATED
CAR LUMBER, DECKING, TIES,
POLES, FENCE POSTS, TIMBERS

CUT MAINTENANCE AND REPAIR COSTS AND TIME

A practical way to reduce maintenance costs is to use pressure-treated lumber in your car building and repair program.

The tangible savings of pressure treatment have been proved by the service records set by pressure-treated ties. It is only logical then to realize these savings for other railroad uses. Let a Koppers representative discuss with you the many uses of pressure-treated wood products for rolling stock and right-of-way applications. Write today.

Courtesy of Northern Pacific Railway

WRITE FOR THIS 16-PAGE
BOOKLET ON COST REDUCTION

T-3

Wood Preserving Division, Koppers Company, Inc., 761 Koppers Building, Pittsburgh 19, Pa.

KOPPERS

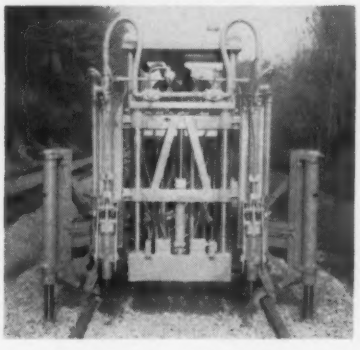
KOPPERS
PRESSURE-TREATED
WOOD

NOW

only machine which will *HOLD GRADE* for any tamper

Machine tamps to grade with no need for over-raising, using the same heavy-duty guns as the McWilliams Multiple Tie Tamper. Speed and ballast compaction are sufficient to hold grade ahead of any multiple tamper. In operation, it clamps to rails . . . raises track with hydraulic lifting cylinders . . . and tamps with four air-powered guns.

Four fixed-position tamping guns extend under the ties to provide superior ballast compaction.



McWILLIAMS

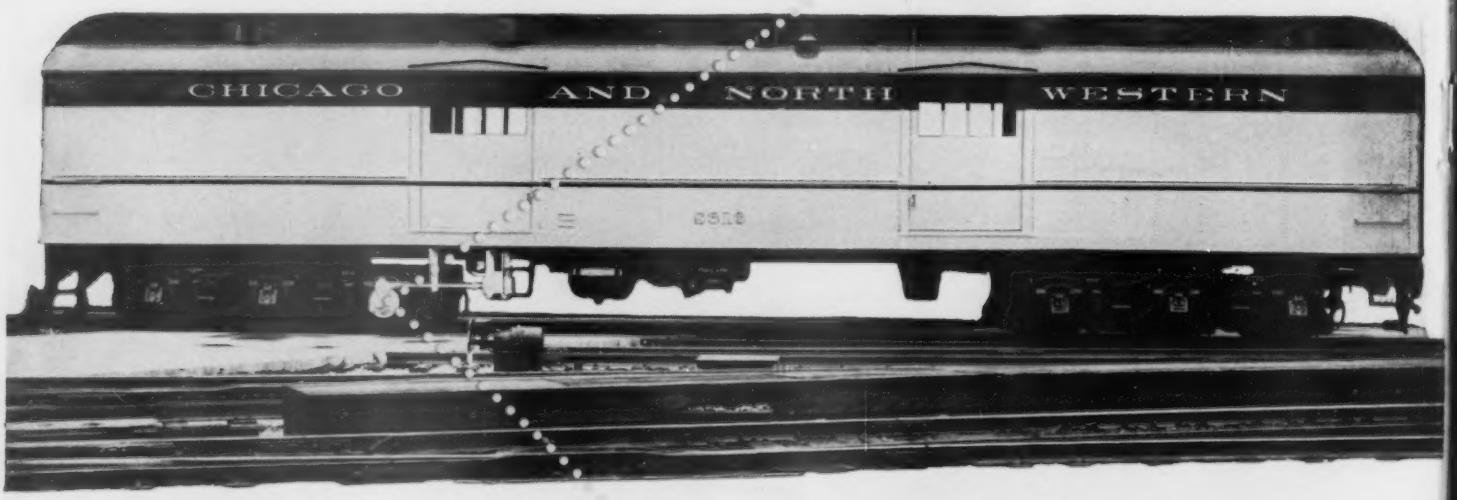
Jack TAMPER

RAILWAY MAINTENANCE CORPORATION . Pittsburgh 30, Pa.

Chicago and Northwestern uses the Spicer Model 2½ to 5KW

POSITIVE GENERATOR DRIVE

CHICAGO AND NORTH WESTERN RAILWAY



. . . . the smallest, lightest and lowest-priced positive drive for railway generators!

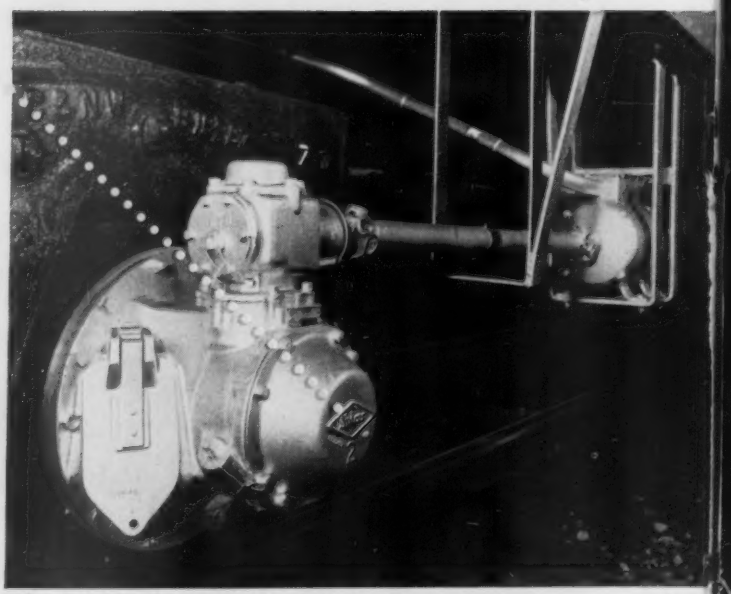
The Model 2 and Model 2-1 Spicer End-of-Axle Drives have been developed for generators up to 5 KW capacity on caboose, cabin, mail, baggage and refrigerator cars.

These drives can be installed either horizontally or vertically, especially meeting the requirements of cabooses and head end cars where minimum maintenance and low operating costs are imperative.

The Model 2 is used on all axles with friction bearings, and on roller bearings where it is not permissable to go through the bearing end cap. It is available for all horizontal and vertical applications in ratios of 1.76 to 1; 2.47 to 1; 3.70 to 1; 5.28 to 1; and 7.55 to 1 (this ratio not available for vertical application).

Model 2-1 is used on roller bearing axles where it is permissable to go through the bearing end cap. It is available in ratios of 1.76 to 1; 2.47 to 1; 3.70 to 1; and 5.28 to 1. Both models are self-contained units employing spiral bevel gears with all wearing parts running in a constant bath of oil.

Ask Dana engineers to help adapt the Spicer Generator Drive to your particular new and old car requirements.



Spicer Generator Drives and Spicer Drives are in use on over 14,000 cars for over 80 railways.

DANA

Spicer

DANA CORPORATION • Toledo 1, Ohio

DANA PRODUCTS Serve Many Fields:

AUTOMOTIVE: Transmissions, Universal Joints, Propeller Shafts, Axles, Powr-Lok Differentials, Torque Converters, Gear Boxes, Power Take-Offs, Power Take-Off Joints, Clutches, Frames, Forgings, Stampings.

INDUSTRIAL VEHICLES AND EQUIPMENT: Transmissions, Universal Joints, Propeller Shafts, Axles, Gear Boxes, Clutches, Forgings, Stampings.

AVIATION: Universal Joints, Propeller Shafts, Axles, Gears, Forgings, Stampings.

RAILROAD: Transmissions, Universal Joints, Propeller Shafts, Generator Drives, Rail Car Drives, Pressed Steel Parts Traction Motor Drives, Forgings, Stampings.

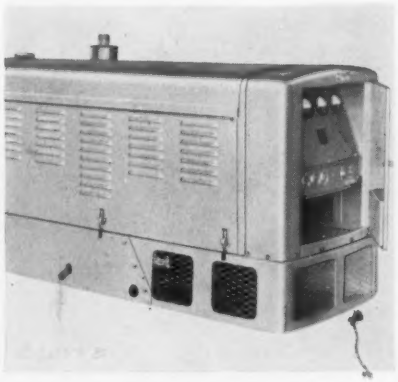
AGRICULTURE: Universal Joints, Propeller Shafts, Axles, Power Take-Offs, Power Take-Off Joints, Clutches, Forgings, Stampings.

MARINE: Universal Joints, Propeller Shafts, Gear Boxes, Forgings, Stampings.

Many of these products manufactured in Canada by Hayes Steel Products Limited, Merriton, Ontario

What's New in Engineering and M/W

MORE NEW PRODUCTS ON NEXT PAGE ►



Stand-By Electric Plants

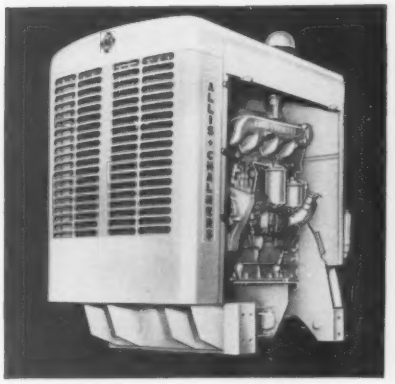
Full-rated electric power for both stand-by emergency use and primary power application is claimed for a new HC Series of water-cooled, revolving-armature electric plants. Completely self-contained, the new series is available in either 10,000 or 15,000-watt a-c size ranges in voltages to 460. The generator is direct-connected to a heavy-duty 41-hp Continental F-162 engine, operating on either gasoline or gaseous fuel. *D. W. Onan & Sons, Inc., Dept. RA, 2515 University ave., S.E., Minneapolis 14, Minn.*

Wrought Iron Development

Improved 4-D wrought iron is produced by substantially increasing the deoxidation of the base metal; increasing the phosphorous content in relation to other components; and using a new silicate fibrous material. Approximately 250,000 of these silicate fibers are evenly distributed throughout each cross-sectional square inch of the metal. The manufacturer says tests have shown 4-D wrought iron has greater uniformity and improved physical properties. *A. M. Byers Company, Dept. RA, Clark building, Pittsburgh 22.*

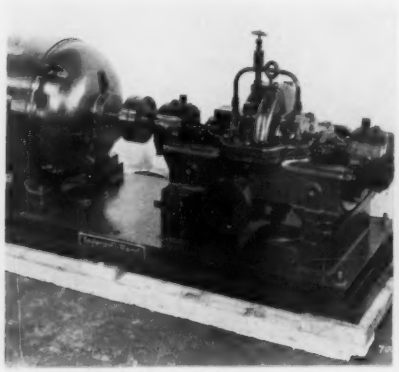
Adds Power to Engines

A growing demand among original equipment manufacturers for more horsepower has resulted in higher power ratings in the Wisconsin line of air-cooled engines. The top rating is now held by the new Model VR4D, V-type, 4-cylinder engine with 56 hp, instead of the former high of 37 hp. The smallest engine model, ACN, now has a top rating of 6 hp. The two-cylinder engines, as well as the other 4-cylinder models, also have been stepped up. *Wisconsin Motor Corporation, Dept. RA, 606 Wisconsin ave., Milwaukee 3.*



New Diesel Engines

Two new power units have been made available. One, Model D-344, is a 4-cylinder 88-hp unit and the other, Model D-516, is a 6-cylinder 131-hp engine. Both are designed to serve a wide range of power requirements where heavy-duty general utility units are adaptable. They are said to be equipped with a combustion system having low peak pressures and simplicity of design that assures fuel economy and low operating costs. *Allis-Chalmers Manufacturing Co., Dept. RA, Tractor Group, Milwaukee, Wis.*

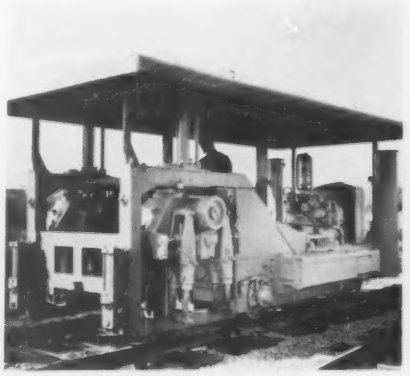


Two-Stage Pump

Many uses are claimed for a new two-stage pump, designated the 1½ GT. It is designed for general water service where low capacities and medium heads are needed. The 1½ GT handles capacities up to 250 gpm and heads up to 600 ft. It is horizontally split and has its two single-suction impellers mounted back-to-back to neutralize any axial thrust. All internal parts of the pump are said to be accessible without disturbing the suction or discharge piping. *Ingersoll-Rand, Dept. RA, 11 Broadway, New York 4, N.Y.*

Improved Weed Burner

Several improvements have been made to the W55 weed burner and snow melter. The most important is said to be the replacement of the low-speed mechanical drive in the two-speed auxiliary transmission with a hydraulic drive. The low-speed drive is especially adapted to snow-melting service where smooth operation is desired at speeds below one mile per hour. Other improvements include a split-flow hydraulic pump, a larger reservoir and a cut-in generator. *Fairmont Railway Motors, Inc., Dept. RA, Fairmont, Minn.*



New Ballast Tamper

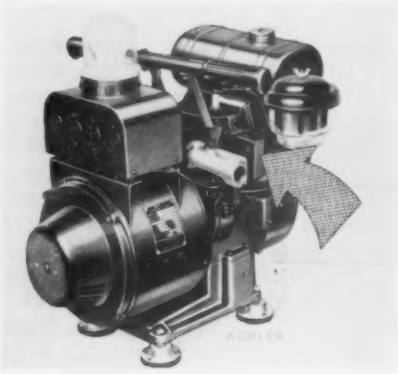
A new Speedtamper, said to be an all-new production tamper, is now available. It has three basic features. One is the greater and more efficient use of hydraulics. Another is described as instantaneous split-second operation whereby either or both tamping heads are put into use immediately. The third is the simplification of design for mechanical tamping while retaining the principle of compaction plus vibration. *Matisa Equipment Corporation, Dept. RA, 1020 Washington ave., Chicago Heights, Ill.*

What's New in Engineering and M/W

MORE NEW PRODUCTS ON PAGE 50

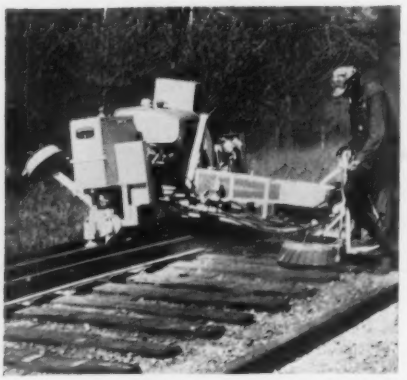
Quieter Hy-Rail Car

The rail equipment on the current model of the A34 Hy-Rail is improved through the use of guide wheels having a rubber tread. The result is quieter operation. Control switches for raising and lowering the guide wheels are heavier and of waterproof construction. The basic vehicle, a 1958 Pontiac station wagon, now has 270 horsepower, a factory installed power lock differential, and heavy-duty coil springs for the car's rear suspension. *Fairmont Railway Motors, Inc., Dept. RA, Fairmont, Minn.*



Engine Idler

Savings in fuel, longer engine service life and lower noise level are advantages claimed for an engine idler when installed on any of three portable models of Kohler electric plants. When there is no load on the plant, the device keeps the plant idling at 1400 rpm. When a load is applied, engine speed increases to the normal 3600 rpm but drops to 1400 rpm again the instant the load is removed. The device may be installed at the factory or furnished as a kit for field installation. *Kohler Company, Dept. RA, Kohler, Wis.*

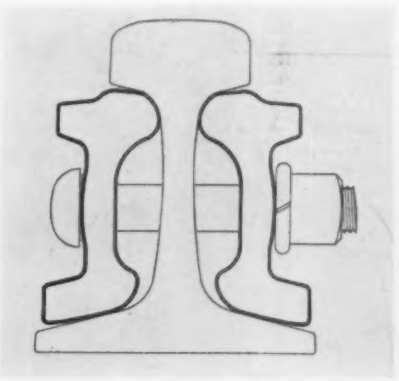


Self-Propelled Adzer

By making the Model CZ tie adzer self-propelled, the unit has been made into a one-man machine. This was done by adding sprockets to the axles of the wheels that run on the rails. A chain drive connects the sprockets to a hydraulic-drive motor mounted above each wheel. A hydraulic pump, driven by the gasoline engine, furnishes the power to drive the motors. The adzer operator controls the movement, both forward and back, from his working position. *Nordberg Manufacturing Company, Dept. RA, Milwaukee.*

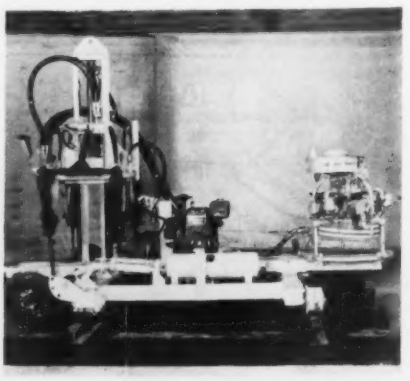
Improved Tamping Jack

"Catching off" track raises is said to be easier with an improved Jack-All, designated the Super Jack-All. It tamps on the sides of the ties outside the rails with both vibration and percussion. Tamping heads over the ties are spotted automatically. The machine can replace hand jacks in surfacing operations. It has a water-cooled engine with self starter, longer jacking cylinders, hydraulic brakes, and an improved set-off mechanism. *Kershaw Manufacturing Co., Dept. RA, Montgomery, Ala.*



New Joint Bar Design

Several advantages are claimed through the use of a new rail-joint design. Designated Sure-Fit, this design features a curved outer face between the top and bottom flanges of the bars. One advantage is said to be improved bearing between the bolt assembly and the face of the joint bars. Another is reduced stress in the bolts, and a third is that the bars compel correct seating, thereby reducing stress in them as well as in the rails. *Rail Joint Company, Dept. RA, 50 Church st., New York 7, N.Y.*



One-Man Spot Tamper

Designated W99 Series A, a new self-propelled spot tamper has been made available. It is actuated by both air and hydraulic power. Air is used to operate the tamping tools and a rail clamp. Hydraulic power propels the unit, raises and lowers the tamping head and moves it laterally, and tilts the tamping tools under the ties. It is operated by one man and is fitted with pneumatic set-off wheels. A portable set-off is available as an extra. *Fairmont Railway Motors, Inc., Dept. RA, Fairmont, Minn.*

SETS NEW RECORDS IN RAIL LAYING

Visit us at the National Railway Appliance Ass'n. Exhibit of the

A. R. A. A. CONVENTION Booth Numbers 85, 86, 87

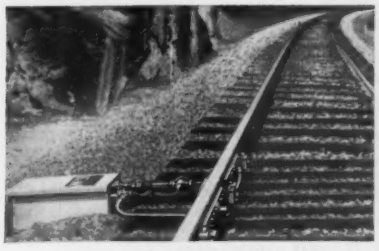
MECO POWER RAIL LAYER

Makes new records in Time Saving! This machine greatly speeds up the laying of rails of every weight and length. Makes new records in Economy! The Meco Power Rail Layer is inexpensively operated by a standard 4-cycle power unit, usually with a machine crew of 3 or 4 men.

A Meco easily sets in the rails for a large gang of 100 men or more. And—the first cost is only a fraction of that for other rail laying machines.

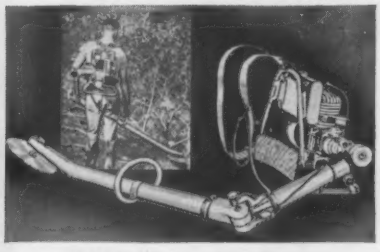
★ **Maintenance Equipment Company** ★
Division of Poor and Company
RAILWAY EXCHANGE BUILDING - CHICAGO 4, ILLINOIS

R-996-RRRA



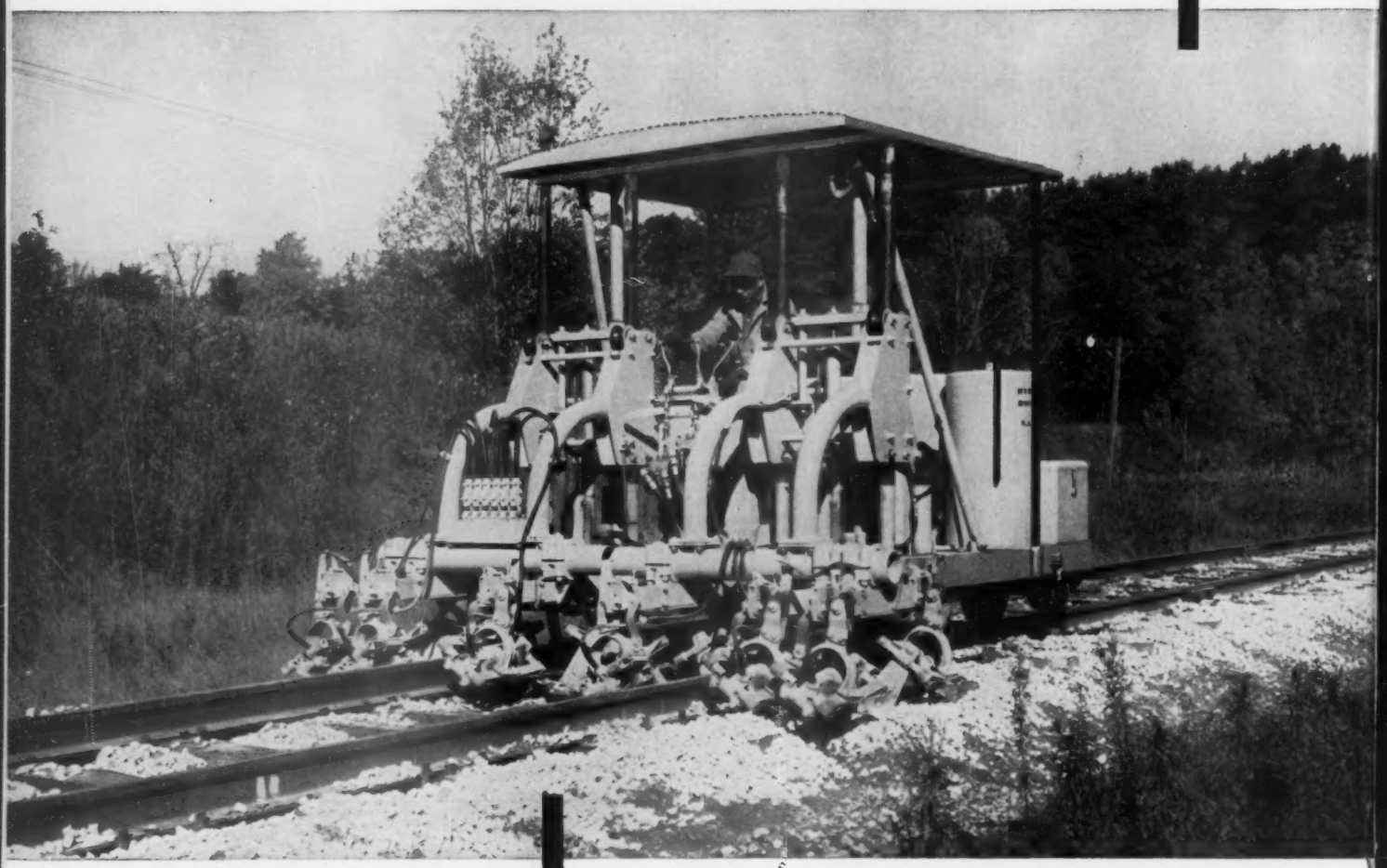
MECO RAIL AND FLANGE LUBRICATOR
Doubles to quadruples curve rail and locomotive wheel flange life, by reducing friction between rails and wheel flanges on curves. Also makes possible higher speeds with greater safety.

MACK REVERSIBLE SWITCH POINT PROTECTOR
Prolongs the life of switch rails about 4 times; then is reversed and again extends the switch rail life for another similar period.



BRUSH CUTTER
Cuts right-of-way maintenance costs. One operator with the new, light-weight, Southworth can do the work of eight men using brush hooks or scythes. Extreme maneuverability, "work horse" power, light-weight are important advantages.

Buy the BEST ... buy JACKSON!



SPLIT WORKHEAD permits tamping more track in leads and turn-outs than can be handled by single crosshead machines.

JACKSON MANUALLY GUIDED TIE TAMPERS These machines and the power plants from which they are operated, are exceedingly efficient; widely used by small gangs in low lifts and smoothing work, cross-overs and spots the on-track machines can not reach.

This VASTLY IMPROVED VERSION OF THE

JACKSON MULTIPLE TAMPER

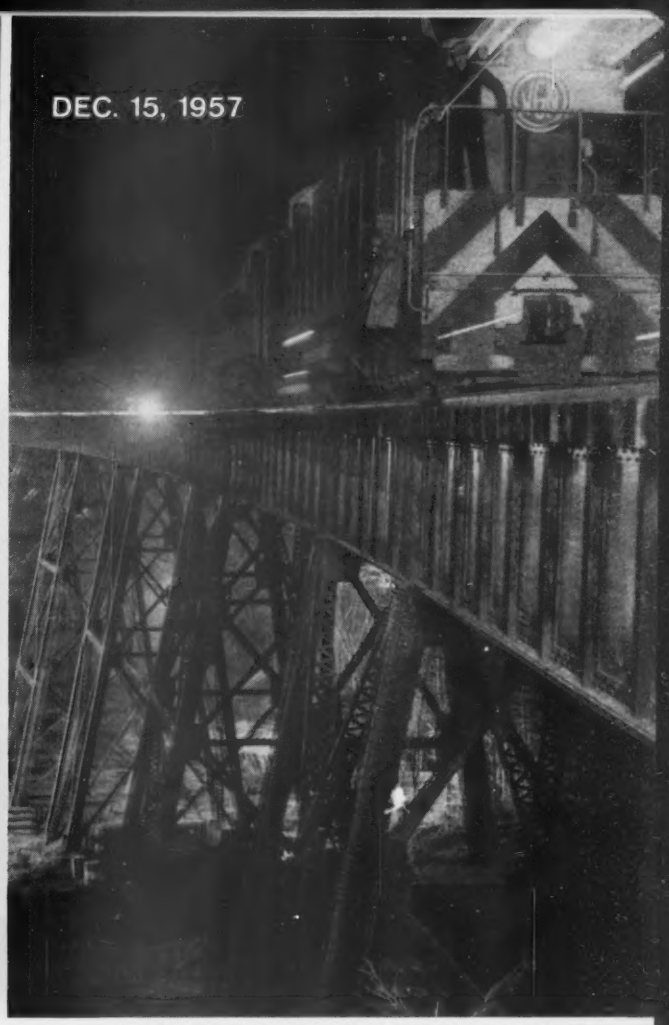
Better than ever for fast, uniform and economical ballast placement on construction and major rehabilitation jobs or new ballast insertions where the raise is high. O.K. also for regular out-of-face maintenance when track lift equals or exceeds maximum ballast dimension. O.K. again for low lifts and smoothing in graded or pit-run gravel or "small grain" ballasts readily penetrated by the Multiple Tamper. For the small road, the contractor, and the class 1 road having high lift programs, or work in light ballast, this low-cost, versatile, medium power tamper is ideal. Split Crosshead and faster indexing from tie to tie are some of its major improvements. Let us give you the complete facts.

Acquirement plans to suit your needs.

See both ***the JACKSON MULTIPLE AND TRACK MAINTAINER at the N.R.A.A. SHOW — the Coliseum, Chicago***
BOOTHS 119 to 121, 138 to 141

JACKSON VIBRATORS, INC.
LUDINGTON, MICHIGAN

ACCIDENT OCCURRED 12:30 a.m., December 2, 1957



TRAIN SERVICE RESTORED 12:10 a.m., December 15, 1957

Photos courtesy of George Smith, THE LYNCHBURG ADVANCE.

American Bridge completes bridge repair job 8 days ahead of schedule!

First Train Crosses Rebuilt Trestle Just 12 Days, 23 Hours, 40 Minutes After Wreck

When a broken rail caused 39 loaded freight cars to plunge off a 75′ high trestle at Phenix, Virginia, the damage to the structure was so extensive that bridge engineers figured it would take fully three weeks to repair the trestle and restore service.

The accident happened at 12:30 a.m., December 2, 1957. American Bridge was called in immediately after assessing the damage. Instructions were quickly sent to the Roanoke Plant where round-the-clock work began on fabricating the structural steel needed to replace the bent and twisted spans and numerous other parts. They fabricated two girder spans approximately 30 feet long, and a third about 60 feet long. This plant also fabricated several 60-foot tower legs and numerous other parts including necessary bracing units.

The American Bridge erecting crew was busy at the site only four days after the accident happened. Working two ten-hour shifts, seven days a week, the erecting crew completed the job at 12:10 a.m., December 15, 1957, *8 days ahead* of the estimated schedule. The first train crossed the bridge just 12 days, 23 hours and 40 minutes after the accident.

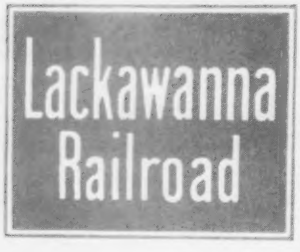
Fortunately, emergencies such as this are rare; but when they do occur, you can rely on American Bridge to help you meet them. In everyday construction and repair jobs, too, American Bridge offers the ultimate in equipment, experience and engineering know-how.

American Bridge Division of USS United States Steel

General Offices: 525 William Penn Place, Pittsburgh, Pa. Contracting Offices in: Ambridge · Atlanta · Baltimore · Birmingham Boston · Chicago · Cincinnati · Cleveland · Dallas · Denver · Detroit · Elmira · Gary · Houston · Los Angeles · Memphis · Minneapolis New York · Orange, Texas · Philadelphia · Pittsburgh · Portland, Ore. · Roanoke · St. Louis · San Francisco · Trenton United States Steel Export Company, New York

NOW ALL THESE ROADS BENEFIT FROM

acf RETRACTABLE



T.T.X.*

Canadian Pacific — Spans the World

"Follow the Flag" — Wabash

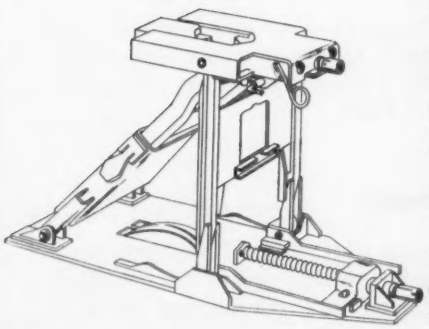
N&W Railway

Chicago North Western Line

M-K-T — Missouri Kansas Texas Lines

TRAILER-HITCHES

ACF Retractable Trailer-Hitches give these 4 big benefits:



SPEED! one man does job in less than three minutes, saves terminal time as well as costly man-hours.

SAFETY! one-unit tie-down gives greater safety to trailer and lading, eliminates need for chocks or chains.

ECONOMY! secure tie-down permits unrestricted interchange without special handling.

PROTECTION! 40,000 foot-pounds *extra* cushioning protects trailer and cargo.

Immediate delivery for installation on your present cars as well as on new ACF flat cars. For full information, price and delivery, get in touch with your nearest ACF office.

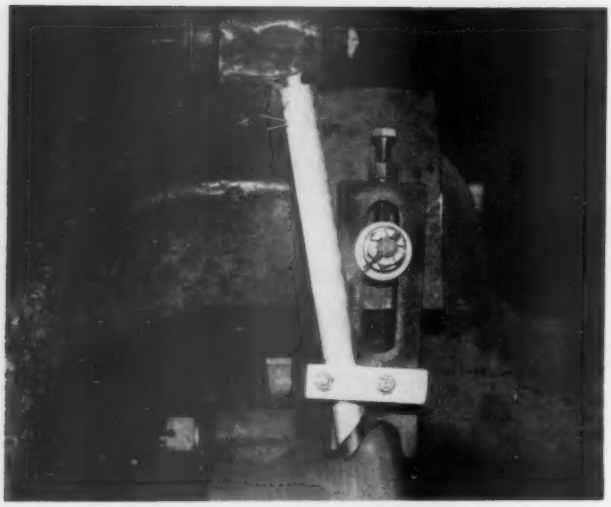
AMERICAN CAR AND FOUNDRY, Division of ACF Industries, Incorporated, 30 Church Street, New York 8, N. Y.
Sales Offices: New York—Chicago—St. Louis—Cleveland—Washington, D. C.—Philadelphia—San Francisco.

AMERICAN CAR AND FOUNDRY
DIVISION OF ACF INDUSTRIES, INCORPORATED

RETRACTABLE TRAILER-HITCH

*Includes nine member railroads.

NEW PRODUCTS REPORT: What's new in



FLANGE LUBRICATOR

An improved flange lubricator, designated Type TA, has been designed by the National Aluminate Corporation to provide several advantages over previous types. Clearances have been a problem in the past in replacing the lubricant. Among the improved features of the new design is a special swivel mounting that eliminates this problem. With the Type TA lubricator it is possible to replace the dry molybdenum disulfide stick lubricant without the necessity of removing any of the parts.

Another improvement in the Type TA flange lubricator permits the guide shoe to be adjusted simply, quickly, and positively.

Also, the suspension mounting has been redesigned to prevent grabbing and chafing and to apply the lubricant smoothly. *National Aluminate Corp., Dept. RA, 6216 West 66th place, Chicago 38, Ill.*

COPYING MACHINE

A new lightweight, more-compact model of Minnesota Mining & Manufacturing Company's Thermo-Fax "Secretary" copying machine has recently been introduced. According to the manufacturer, the new copying machine will produce exact copies in less than four seconds.

The Thermo-Fax process is all-electric, completely dry and completed in a single step. A new push-button control has been added to regulate the "on" and "off" positions of the machine. The dial for setting exposures has been enlarged for easier operation.

The new Thermo-Fax "Secretary" weighs 45 lb and measures 19 in. wide by 15 in. deep by 9 in. high. Taking up about the same amount of space as a standard office typewriter, the new model can be operated from a desk top. *Minnesota Mining & Manufacturing Co., Dept. RA, 900 Bush ave, St. Paul 6, Minn.*

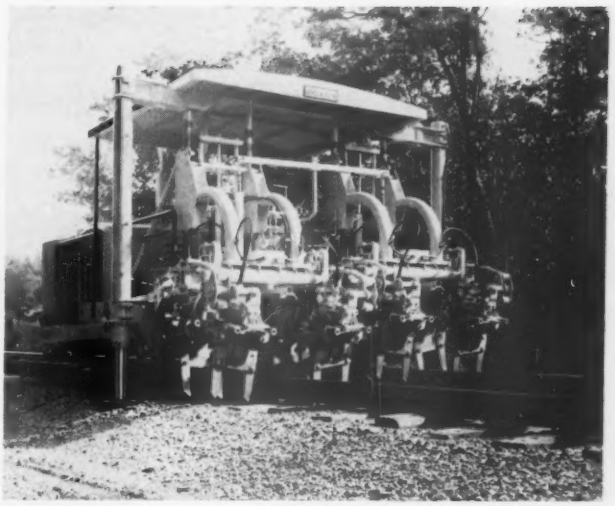
BRIDGE DECK MACHINE

Incorporated in the new RMC Bridge Deck Machine are most of the tools used in timber deck work, including: four wood borers for automatic positioning and drilling of from one to four holes, two supplementary hand-held borers, two hand-held impact wrenches for removing lag screws from guard rails and a pantograph-mounted spiking hammer that will reach outside guard timbers and down to cap. Pantograph design assures that spikes will be driven vertically, regardless of pantograph position. Air is provided by a 125-cfm compressor.

A two-speed transmission makes possible speeds from 5 to 20 mph. Movement can be controlled remotely from spiking-hammer pantograph as well as from operator's desk. A hydraulic center lift and turntable permit quick turning or removal from track. *Railway Maintenance Corp., Dept. RA, P.O. Box 1888, Pittsburgh 30, Pa.*

engineering and maintenance of way

SPOT-TAMPER ATTACHMENT



Roads with several Jackson Track Maintainers that have a great deal of spot tamping work can now get a jack-assembly attachment for converting the production tamper to spot-tamping work. The jack assembly, applied at the factory to '58 models, has a heavy-duty transverse frame member attached to the front chassis section. Two 25-ton capacity hydraulic lifting rams are hinge-mounted to permit quick and positive swing and lock to both traveling and jacking positions. Two clamps, engaging the rail ball, project from the transverse member. Hydraulically actuated, independently operative and interconnected with the ram system, these automatically clamp rails lifted. A 2000-psi pump serving all hydraulic operations of the machine provides power for jack assembly operation. Jack-conversion kits are available for '57 and earlier models of the device. *Jackson Vibrators, Inc., Dept. RA, Ludington, Mich.*

TOUGH CUTTING EDGES

Caterpillar Tractor Company's bulldozers and scrapers are now equipped with blades hardened by a new process for increased durability and longer blade life. Shock strength and greater wearability are claimed for the newly developed cutting edges. According to the manufacturer, the new cutting edges on bulldozers and scrapers will require fewer replacements and, consequently, less downtime of equipment.

The improved cutting edges are achieved by a special hardening technique called by the manufacturer the "Hi-Electro" process. It is claimed that this permits obtaining the exact control needed to produce a superhard case and yet retain a shock-resistant core. A further advantage claimed for the "Hi-Electro" process is that the edge's projected area is kept thin enough for good penetration, the manufacturer says. *Caterpillar Tractor Co., Dept. RA, Peoria, Ill.*

MEDIUM SIZE TRACTOR

LeTourneau Westinghouse has developed a Model D Tournatractor as a medium-size companion to the 208-hp Model C machine. The new rubber-tired tractor has a 4-cylinder, 143-hp diesel teamed with a 5-speed earthmover type transmission. This provides a full range of speeds from 2 mph for dozing to 15 mph for highways.

The outstanding feature claimed for the new model is a planetary steering system for permitting turns while maintaining full power on all four drive wheels. The system is operated by air-pressure controls, using conventional steering levers. Sharpness of turn is adjusted to forward speed automatically. At 2 mph, the sharp-turn radius is about 9 ft; at 15 mph the orbit extends to just under 100 ft. Work tools for Model D include an 8-ft bulldozer, an 8½-ft snow plow and a double-drum power control unit. *LeTourneau Westinghouse Company, Dept. RA, Peoria, Ill.*

THERE'S A REASON WHY-

The reason why railways all over the world are using the IMPROVED FAIR ANCHOR is because of simple construction, ease in application, and long lasting dependable service.

THE IMPROVED FAIR is in use on Railways all over the world

THE P. & M. CO.

CHICAGO • NEW YORK • DENVER • ST. LOUIS • BOSTON • ST. PAUL • WASHINGTON • SAN FRANCISCO • MEXICO CITY

THE P & M CO. (LTD.) MONTREAL

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BALLAST CLEANING

Just Ask the Railroads That have used

SPENO BALLAST CLEANING

SPENO RAIL GRINDING

The repeat business which we have enjoyed through the years proves the value of our service and prompts our slogan.

Just Ask the Railroads That have used us!

RAIL GRINDING

FRANK SPENO RAILROAD BALLAST CLEANING CO., INC.

306 North Cayuga St., Ithaca, N. Y.

Tie Renewal Costs Can Be Cut

Mechanization of section gangs increases tie renewal production by 75 per cent.

This was stressed at the first 1958 meeting of the Metropolitan [New York] Maintenance of Way Club. The speaker was F. L. Etchison, chief engineer, Western Maryland.

"Cross-tie replacement represents one of the largest essential items in any typical maintenance-of-way budget," Mr. Etchison said. Hence, any means of cutting replacement costs is a potential source of great savings.

There are two ways to cut tie renewal costs, Mr. Etchison added. One is to reduce the number of ties needing renewal. The other is to cut the unit cost of placing ties in track. This can be done by mechanizing section gangs. Mechanization, he said, increases production—and thus cuts unit costs—by an average of 75 per cent per man.

A large combined timbering and surfacing gang, fully mechanized, should average 12 ties per man-day on a heavy traffic main line. The same gang, using manual methods, would install only 7 ties per man-day. On a light traffic main line, the mechanized gang should average 14 ties per man-day while the manual gang averages 8. These figures are based on a survey made by Mr. Etchison for the Roadmasters and Maintenance of Way Association.

The average cycle for out-of-face tie renewals is four and one-half years. Replies to Mr. Etchison's survey questionnaire indicated existence of differences between tie renewal procedures. About half of the replying roads renewed ties in connection with tamping operations. The other half renewed ties in alternate years. Or they sent out tie renewal gangs ahead of and separate from ballasting operations. Mechanization helps both groups.

Mr. Etchison described different types of mechanized gangs to cover differences in practice and operating conditions. For use on single track or heavy traffic lines, a 16-man gang with a minimum of on-track equipment was recommended.

One such gang handled tie renewals, averaging over 14 ties per man-day, at a cost slightly exceeding $1.00 per installed tie. A nearby gang using manual methods averaged 7½ ties per man-day, at a cost of $1.80 per tie.

Maximum production at lowest cost for both tie renewals and surfacing, Mr. Etchison said, is obtained from a coordinated gang. Such a group includes 24 to 36 men, including a mechanic, under direction of a track supervisor. Number of men assigned and equipment used varies to meet specific conditions.

One road using this kind of gang reported it averaged 4,500 feet of track timbered and surfaced per day. It renewed about 300 ties per mile. Cost per tie installed was 93¢. The supervising division engineer said hand installation of ties while raising track would have cost about twice as much.

Caution is necessary, Mr. Etchison pointed out, in shooting for high production figures. "Don't try to break records by getting old ties out and new ones in without regard for the condition the track is left in."

If you go too fast, costs of correcting the track might eat up the savings from mechanization. Mechanized tie renewal gangs, properly operated, will show enough economy to justify their use without trying to stretch their performance.

Railroading After Hours with Jim Lyne

PAY FOR "STANDBY" — During a recent heavy snowstorm a lot of spectators at the Bowie, Md., racetrack couldn't use their autos to get home—and the PRR rescued them with special trains, at regular tariff rates.

When a railroad is ready to provide service like this—used only once in a long time—I'd suppose it should be entitled to something above the regular fare, for being ready to provide such service on the 364 days out of the year it is not used. If you have electricity in a house and use it only one day a year—that one day's use isn't all you have to pay for.

LOPSIDED PANELING—I was a questioner on one of these transportation "panels" recently. What strikes me is the low ratio of representation of railroads on many of these panels. On this particular one there were representatives of freight forwarders, pipelines, trucks, buses, airlines, inland waterway carriers, ocean shipping—and one lone railroad man. Half of the transportation industry had one representative and the other half of it had seven.

Maybe there's an advantage in this disproportion, but I doubt it. The railroads certainly have more than one-eighth of the difficulties of the transportation industry that the responsible public needs to know about.

FAULTY REASONING—Another thing about these public discussions of transportation that never ceases to amaze me is the low-calorie logic that many speakers use to support their arguments.

For example, at the session I have in mind there was a speaker from the airlines. He was talking about "user charges" for government-provided airway services. He didn't object to such charges in principle. But then, he went on to say, the airlines earned only $25,000,000 net last year. And he argued that an industry that pays more "user charges" than its net income certainly is paying enough.

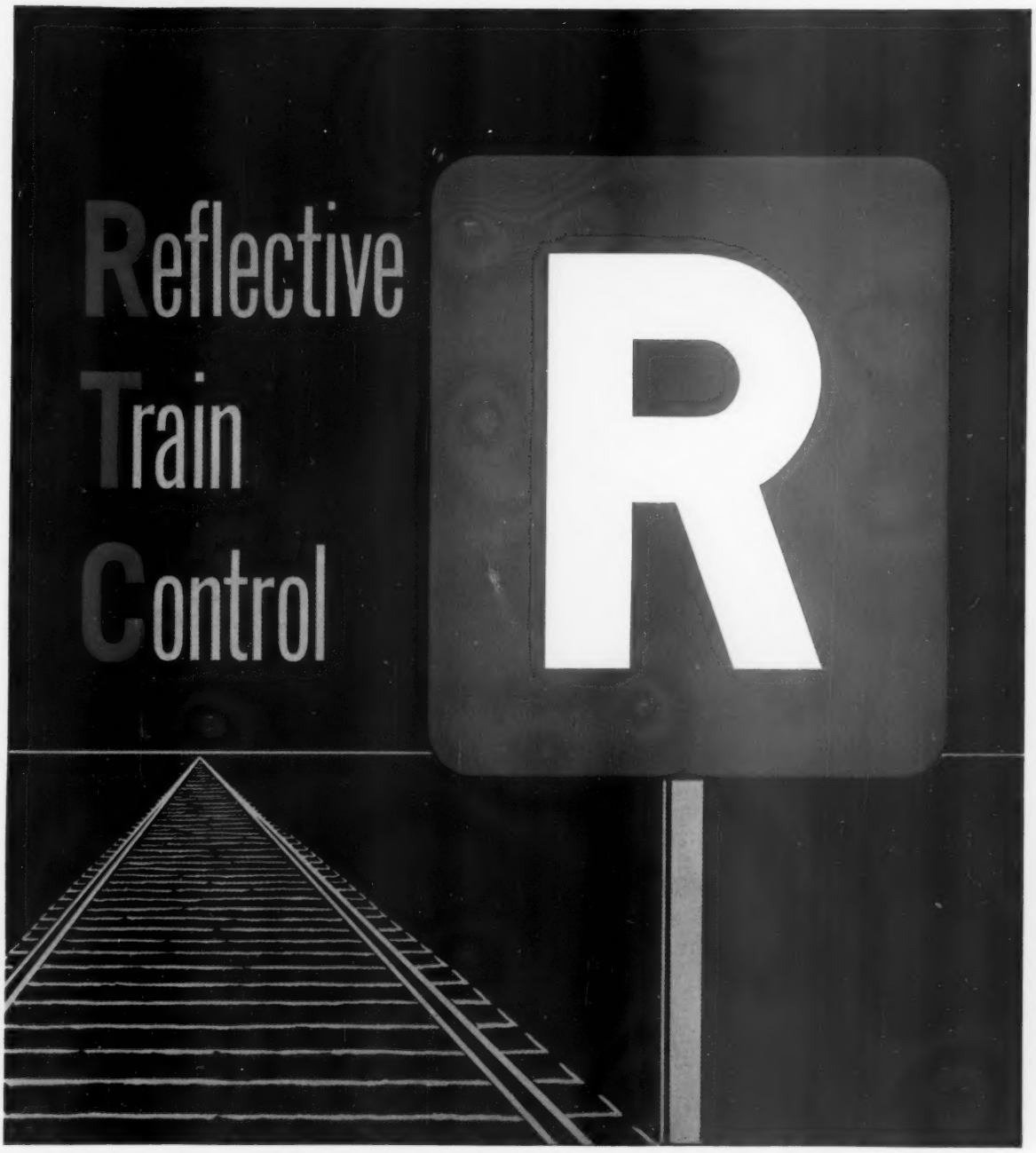
What logical connection can there be between what a fellow has left over after he pays all his bills—and the rent his landlord ought to charge him?

I think it would be amusing, some time, to invite a professional logician to one of these public discussions—and have him score each speaker for the quality of his reasoning. Or better yet, instead of a score card, provide the attendant logician with a gong—to sound off whenever he detects a foul. Everybody'd think there was a fire.

If engineers designed bridges with mathematical calculations as odd as the reasoning many public speakers use in prescribing national economic policy for transportation, we'd all be drowned.

HAPPY OIL CARRIERS—In mentioning this airman's speech, I certainly don't want to pick on him. Most of his talk made sound sense. The airlines have a real problem of raising capital—similar to that of the railroads. The bus operators have their problems, too.

The only segments of transportation that seem to have practically everything rosy for them are the pipelines and barge operators. One of them is wholly self-supporting and the other is heavily subsidized—but neither of them is strictly regulated, and both of them (mainly) are offshoots of the burgeoning and dynamic oil business. This last, probably, is the secret of their success—and the railroads might be sharing in it too, except for the "commodities clause."



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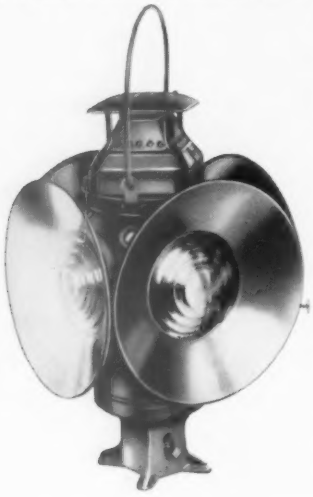

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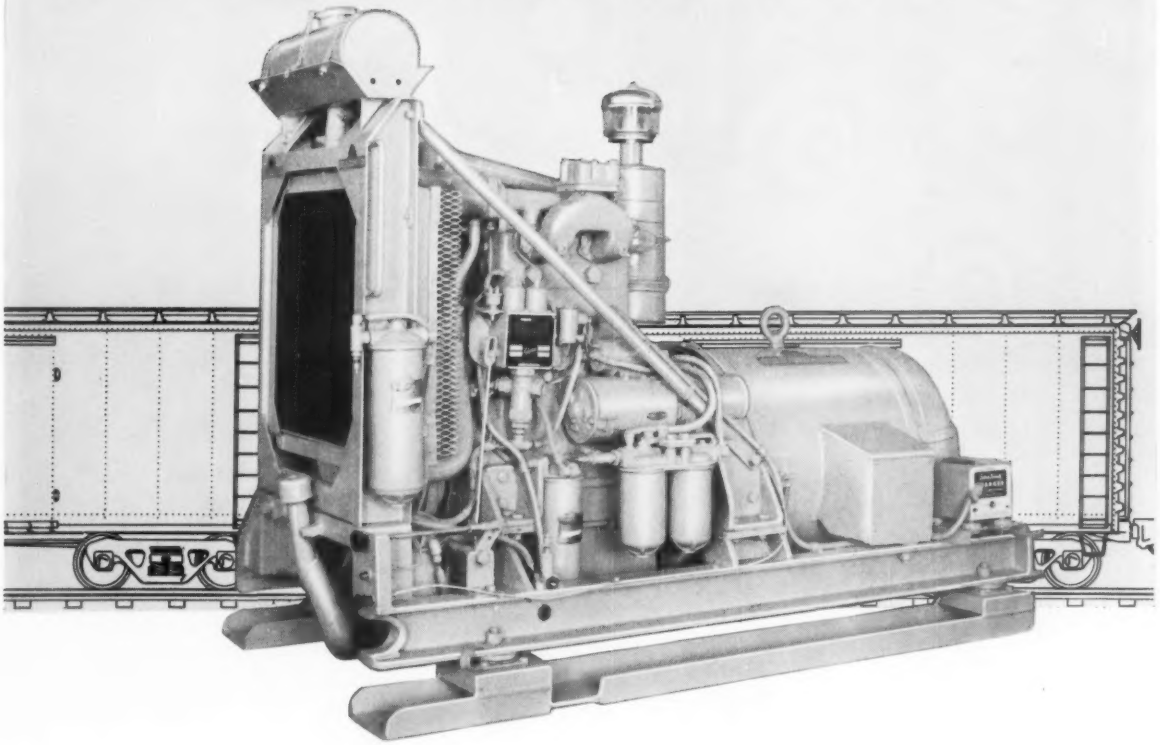

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* *Official A.A.R. Capacity.* The new MARK 40 is the highest capacity *friction* draft gear ever offered for standard pockets.

MARKET OUTLOOK *at a glance*

Carloadings Rise 12.4% Over Previous Week's

Loadings of revenue freight in the week ended March 1, totaled 533,645 cars, the Association of American Railroads announced on March 6. This was an increase of 61,256 cars, or 12.4%, compared with the previous week; a decrease of 150,338 cars, or 21.4%, compared with the corresponding week last year; and a decrease of 157,331 cars, or 22.1%, compared with the equivalent 1956 week.

Loadings of revenue freight for the week ended February 22 totaled 492,389 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, February 22

District	1958	1957	1956
Eastern	76,986	108,652	117,367
Allegheny	78,714	119,577	140,360
Pocahontas	38,635	59,407	60,041
Southern	97,623	122,782	130,512
Northwestern	57,313	64,475	71,918
Central Western	96,687	105,189	112,029
Southwestern	46,431	46,548	54,791
Total Western Districts	200,431	216,212	238,738
Total All Roads	492,389	626,630	687,018
Commodities:			
Grain and grain products	47,603	46,569	45,503
Livestock	4,211	4,541	6,613
Coal	97,865	130,238	139,311
Coke	6,954	13,521	13,503
Forest Products	31,803	37,514	43,400
Ore	12,629	18,960	19,767
Merchandise l.c.l.	41,217	49,061	55,220
Miscellaneous	250,107	326,226	363,701
February 22	492,389	626,630	687,018
February 15	533,237	675,966	698,319
February 8	532,289	665,251	684,328
February 1	550,426	647,972	680,989
January 25	550,667	665,745	691,850
Cumulative total, 8 weeks	4,272,554	5,180,800	5,463,427

IN CANADA.—Carloadings for the seven-day period ended February 21 totaled 63,395 cars, compared with 66,919 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
February 21, 1958	63,395	26,358
February 21, 1957	75,566	35,383
Cumulative Totals:		
February 14, 1958	484,912	211,623
February 14, 1957	521,793	233,985

New Equipment

FREIGHT-TRAIN CARS

► *Car Ownership Rises.*—Class I roads on February 1 owned 36,960 more freight cars than on same date last year, according to AAR report summarized below. Repair ratio was 1.3% higher than a year ago.

	Feb. 1, 1958	Feb. 1, 1957	Change
Car ownership	1,748,802	1,711,842	+36,960
Waiting repairs	94,947	70,852	+24,095
Repair ratio	5.4%	4.1%	+ 1.3%

LOCOMOTIVES

► *Locomotive Ownership.*—Class I roads owned or leased 27,460 diesel-electric units on February 1, AAR reports. This was an increase of 1,139 over February 1, 1957.

	Owned or Leased February 1		Stored Serviceable February 1		Waiting Shop February 1	
	1958	1957	1958	1957	1958	1957
Diesel (Units)	27,460	26,321	941	69	993	996
Steam (Locomotives	2,257	3,527	1,024	699	532	514
Electric (Units)	501	519	28	14	65	66

SPECIAL

► *Union Pacific.*—Timken Roller Bearing Company will provide 100 all-purpose bearing assembly units for 100 70-ton covered hopper cars being built for UP by Pullman-Standard and American Car & Foundry. The cars will be equipped with narrow pedestal-type truck side frames.

New Facilities

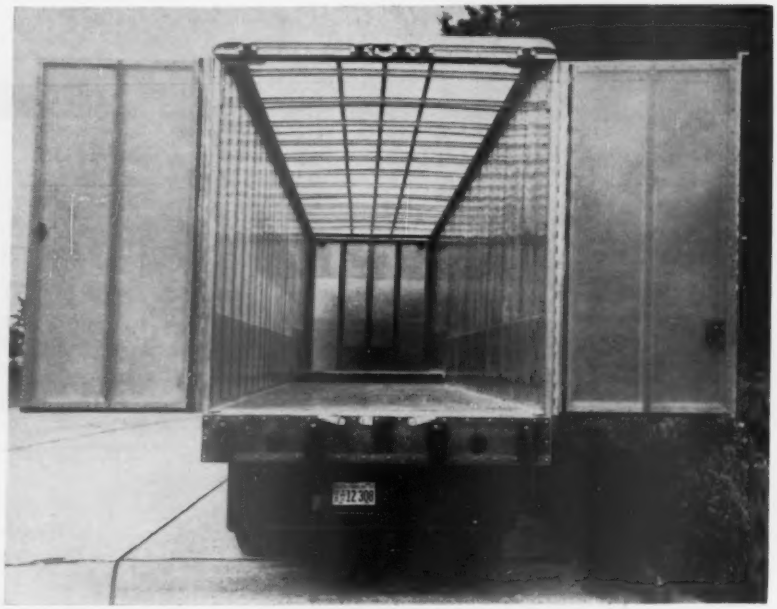
► *Alaska.*—Asked for bids on ballasting and surfacing about 43.8 miles of main line track and 2.5 miles of siding and spurs between MP 304.4 and MP 348.2. Bids will be opened March 18.

► *Louisville & Nashville.*—Ordered equipment from General Railway Signal for installation of 92 miles of type K1 centralized traffic control between Anchorage, Ky., and Latonia. From the sectional type control machine in Latonia, the dispatcher will control 19 electric switch machines and 55 signals. Eighty-nine coded track circuits will be installed on this project.

► *New York Central.*—A 30-story office building will be built on the NYC-owned Park Avenue block front between 50th and 51st streets, New York City. Building will be constructed by Uris Brothers, which is leasing the property from Central for initial 33-year period at rentals totaling nearly $7,000,000, with renewal options. Building, to be a tower-type structure, is slated for completion in 1960.

► *Union Tank Car Company.*—Constructing all-steel dome structure in Baton Rouge, La., to house regional maintenance and tank car repair facilities. Structure, described as world's largest circular building without internal supports, is believed to be first industrial use of a dome structure in this country. Building, and facilities it will house, will cost over $1,000,000, less than a conventional car repair plant of comparable size. Entire project —part of firm's $200,000,000 postwar capital expenditure program, mainly for new tank cars and shop facilities—is to be completed in mid-1958.

a RAILWAY AGE time-saver page



Plastic Semitrailer Saves Weight

Plastics have replaced metals in railroad car construction only to a small extent, but one truck trailer manufacturer has gone all the way. This semitrailer, one of seven, is built of reinforced plastic panels made from polyester resins. The 35-ft van weighs 8,900 lb, about as much as conventional 30- or 32-footers. Its capacity is 2,128.8 cubic feet. Any dry cargo can be handled. The color-fast panels are translucent. The vans, built by Veenema-Wiegers, Inc., are operated by Celanese Corp.

CNR, CPR Fight Non-Op Boosts

The CNR and CPR last week threw a new weapon into their fight against wage increases and extra fringe benefits for 130,000 non-operating employees.

The two Canadian roads are opposing union demands that would cost them $128 million a year. They told a conciliation board they could re-create their non-operating force at wages lower than they are now paying. And they produced evidence which—they claimed—proved it.

The railroads rested their case on a wage comparison study of equivalent occupational skills in outside industry. It represented a new departure in the settlement of wage disputes by the wage-comparison method. The unions promptly rejected the study.

Previous conciliation boards have based wage settlements on comparisons with the durable goods industries—and the unions want the current dispute settled by the same yardstick. The railroads have argued that such a comparison is unrealistic.

In 1956 the railroads advanced an alternative comparison—a so-called "community standard" of wages. But a conciliation board held that the sex, age and skills of the non-op employees and the group under study were not comparable.

The new "equivalent skills" study reflects the nation-wide distribution of railway employees, the variety of occupations, the level of skills, and the male-female ratio.

It is based mainly on Federal Department of Labour figures, supplemented by data obtained from a wage survey of the Canadian Federation of Mayors and Municipalities.

In spite of the unions' initial reaction to the plan, the Canadian roads were hopeful last week that the new study would overcome previous objections and provide an acceptable standard for the conciliation board.

Fifteen non-op unions have demanded contract concessions including a wage increase of 35 cents an hour, plus increased health and welfare benefits, an additional statutory holiday, longer vacations, and severance pay. These "extras" add up to 11 cents an hour. Total cost would average out to almost $1,000 a year per employee.

The railroads are requesting an extension of existing wage and welfare agreements. They claim that the present slump in traffic—and depressed railway prospects for most of 1958—make them unable to pay any wage increases.

A three-man conciliation board headed by Mr. Justice H. F. Thomson of the Saskatchewan Court of the Queen's Bench began hearings on the dispute last week.

C&WI Acts to Reduce Suburban Train Losses

The Chicago and Western Indiana is seeking Illinois Commerce Commission authority to consolidate its suburban passenger operations.

The line now operates three trains each way, daily except Sunday, between Chicago and Dolton, Ill. Only about 400 to 500 commuters ride the railroad and C&WI says the service is producing a substantial loss.

Major feature of the proposal involves consolidation of two inbound morning trains into one, and like treatment for two outbound evening runs. The road is also seeking permission to drop two Saturday trains.

New Haven Compromise Forestalls Proxy Fight

There will be no proxy fight on the New Haven in connection with current management difficulties.

This was last week's prediction of Mr. J. Douglas Casey, president of A. C. Allyn & Co. Mr. Casey spoke for his own firm and five other banking and investment concerns holding 131,385 shares of the New Haven's 400,715 outstanding preferred shares.

The railroad has agreed to the election of five independent directors, Mr. Casey said. The new directors are not committed to any particular policy and have no strings tying them to any specific program, Mr. Casey stressed. "Their immediate objective . . . will be to help secure the services of an experienced railroad operational man in a top management position," he said.

"The independent directors will help pursue diligently the obtaining of competent operating management of the New Haven Railroad, the halting of the continuing decrease in stockholders equity, and the improving of the commuting public's welfare," Mr. Casey continued.

The preferred stockholders' group has dropped its plans for obtaining a list of stockholders, either from present management or from the courts. This means there will be no battle for proxies. "It is correct to say," a railroad spokesman said, "that this is the end of the fireworks over the present New Haven board."

NEXT WEEK

How the B&M Harnesses Passenger Costs

More than 90% of the road's passenger mileage will be handled by the Budd RDCs this year. One key to the high utilization . . .

Turnarounds with Rapid Servicing

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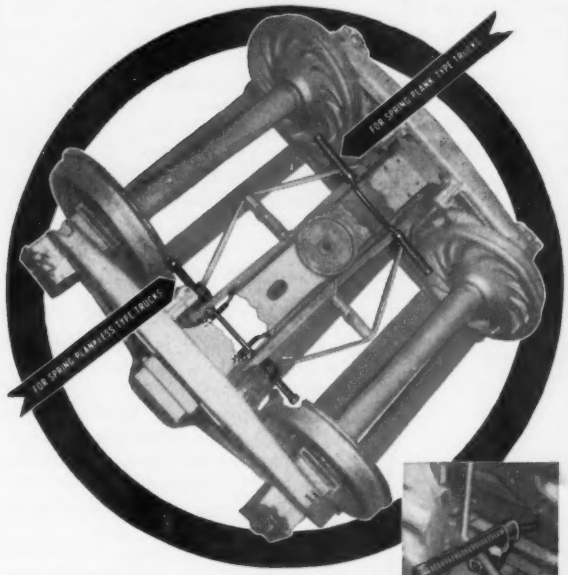
BRAKE BEAM SAFETY SUPPORT



SPRING-PLANK TYPE

The Gripco Brake Beam Safety Support provides the greatest safety at lowest cost. Its dependability has been proven over years of actual service. Gripco Safety Supports are low in original cost, low in application cost and low in maintenance cost, even after years of service.

SPRING-PLANKLESS TYPE
(Safety Loops Included)

ENGINEERING IMPROVEMENTS

1. One design fits both 5'-6" and 5'-8" wheel base trucks.
2. One rod length and one spring length. One interchangeable casting fits both spring plank and spring plankless trucks.
3. Ideal for interchange repairs. New design permits easy and fast applications under all conditions. Nuts need not be removed to apply or remove the support.

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1. An inexpensive trouble-free support for Rebuilt Car Programs.
2. Designed for spring plank and spring plankless trucks. Spring plankless trucks require safety loops which can be bolted, riveted or welded to the bolster.
3. Supports the brake beam in the event of brake beam or hanger failure.
4. Holds brake beam in horizontal position.
5. Holds brake shoe in proper position in relation to the periphery of the wheel.
6. The brake release feature pulls brake shoes away from wheel contact instantly when brakes are released.
7. Prevents unnecessary wheel and shoe wear caused by dragging brake shoes.
8. GRIPCO supports can be removed and reapplied without removing nuts; therefore nuts are furnished in proper position.
9. Brake beams, rods, and levers are held in position under spring tension thus reducing false movements, chattering and wear of hangers, hanger pins and brake heads.
10. Can replace as a billable repair any support except A.A.R. recommended practice (angle-riveted and welded).

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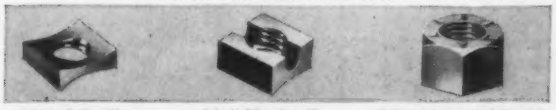

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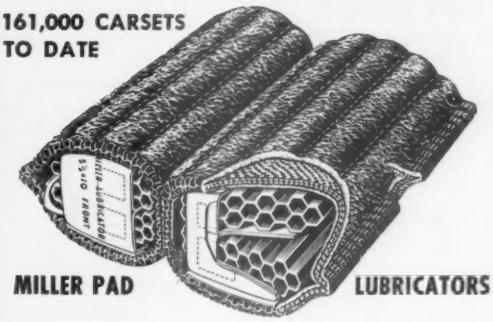

MILLER PAD LUBRICATORS

as of December 1, 1957

THE NORFOLK AND WESTERN HAS 4,294 CARS OF 50 AND 70 TON CAPACITY EQUIPPED WITH MILLER CENTER-FEED PADS WHICH ARE CURRENTLY MAKING 10,722,000 MILES PER SET OUT

as of January 1, 1958

THE NORFOLK AND WESTERN HAS 4,610 CARS OF 50 AND 70 TON CAPACITY EQUIPPED WITH MILLER CENTER-FEED PADS WHICH ARE CURRENTLY MAKING 13,539,000 MILES PER SET OUT

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Hearings Set for IC Fare Case

The Illinois and Interstate Commerce Commissions have scheduled joint hearings on Illinois Central's suburban fare increase case.

Under the schedule, no decision can be expected before May 19—six months after the IC filed its new tariff.

Examiners representing both commissions will hear the case, beginning March 17. The railroad had until March 3 to file its evidence in chief. The March 17 hearing will include formal introduction of IC's case, cross-examination of carrier witnesses and requests by the commissions and other interested parties for additional information.

Evidence by other parties is to be submitted by April 14. Two weeks later a second joint hearing will be held for introduction of protestants' evidence, presentation of other data, and rebuttal.

The case is expected to be marked "heard and taken under advisement" on April 28. Memoranda briefs, however, may be filed up to May 19. Joint or separate orders of the two commissions will follow.

Illinois Central filed the new tariff November 19, 1957, to take effect December 20. President Wayne A. Johnston said at the time that the railroad has property and equipment valued at more than $40,000,000 tied up in suburban operations. Only in two years since 1947, he added, has the line showed a profit.

The proposed increases, Mr. Johnston said, average out to 55%. Granted the full increase, he said, IC would realize annual net income of $880,000 from suburban operations—a 2.1% return.

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IC Studies Interchange Of Piggyback Traffic

Illinois Central piggyback service may be broadened to include interline operations. Studies are now in progress, the road said, on expansion of the service to include interchange with other roads.

IC also has extended piggyback operations to Birmingham, Ala. Schedules call for northbound piggyback shipments to leave Birmingham at 7 p.m., with 19-hour service to East St. Louis, Ill., and 29-hour service to Chicago. Southbound, shipments delivered to IC before close of the business day at Chicago and East St. Louis will reach Birmingham the following afternoon.

Birmingham is the seventh key point on the IC to which piggyback service is now offered.

Three Comrades

These three C&O enginemen were boyhood pals in Toledo, Ohio, attended the same school, started working for C&O the same year—1907. Each is now senior engineer in his district. All three recently won 50-year diamond service pins. Left to right, they're Charles C. Sterner, Toledo; Leon G. Renshaw, Saginaw, Mich., and Fred Heubner, Grand Rapids, Mich.

People in the News

Stuart T. Saunders
N&W

R. H. Smith
N&W

Saunders Becomes N&W President on April 1

Stuart T. Saunders, Norfolk & Western executive vice-president, will become the road's president on April 1.

Mr. Saunders will succeed R. H. Smith, who has been N&W president since June 1946.

Mr. Saunders was born in McDowell County, W.Va., on July 16, 1909. He received his A.B. degree from Roanoke College in 1930 and his law degree from Harvard Law School in 1934. After becoming a partner in the law firm of Douglas, Obear & Campbell in Roanoke, he joined the N&W as assistant general solicitor in April 1939. Mr. Saunders served successively as assistant general counsel, general counsel, vice-president and general counsel and executive vice-president, being appointed to the latter position in October 1956.

Mr. Smith, born in Baltimore, Md., March 10, 1888, received a civil engineering degree from Princeton University in 1911. He first worked for the N&W during the summer of 1910, while attending college. He returned to the road permanently after graduation. After service in various engineering and operating department positions, Mr. Smith was made general manager of the road in 1936, vice-president and general manager in 1939, and vice-president in charge of operation in January 1942. Four years later he was elected president.

PRR Realines Top Officers To Improve Its Efficiency

The Pennsylvania has rearranged its top management to provide more effective and efficient administration. The move, effective March 1, consolidated the work of several system departments but retained the decentralized regional organization.

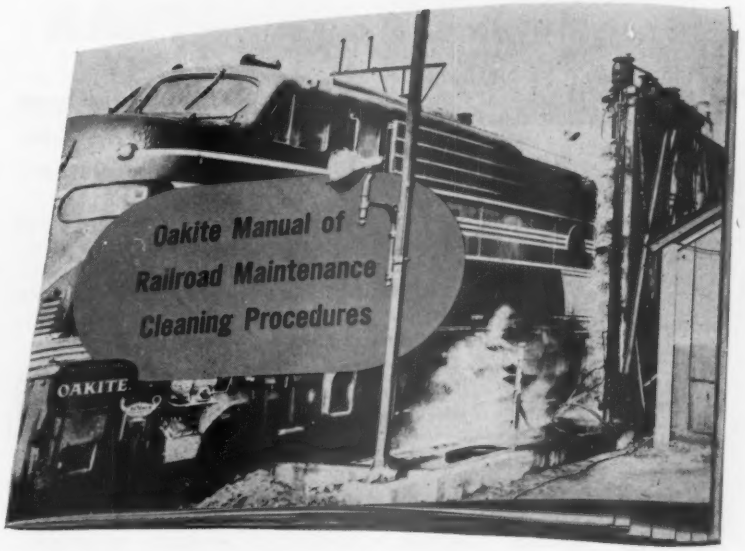
James P. Newell, as vice-president, operations, continues his general supervision of the functioning of the PRR's nine regions. Mr. Newell formerly was vice-president. With Allen J. Greenough, vice-president, transportation and maintenance, Mr. Newell also is responsible for the system's train and other operations.

Freight and passenger sales forces have been consolidated under Fred Carpi, vice-president, sales. Mr. Carpi had been vice-president, freight sales and services. Responsibilities of David C. Bevan, vice-president, finance, now include supervision of accounting, taxation and insurance, as well as finance.

J. Benton Jones, vice-president, passenger sales and services, has become vice-president, purchases and real estate. Warren R. Elsey, vice-president, purchases, stores and equipment, was

A Working Guide to

LOW-COST END RESULTS



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appointed vice-president to handle specific assignments. Walter W. Patchell, former vice-president, research and development, is now vice-president, special services.

Mr. Patchell's first assignment places him in charge of studies of railroad consolidations. Research and development work formerly handled by Mr. Patchell has been assigned to various departments actively engaged in specific phases of the work.

Earl L. Ordell
NP

Randall B. Kester
UP

ILLINOIS CENTRAL.—**Oscar C. Stein,** freight traffic manager, New Orleans, retired March 1 after 55 years' service. **Roy A. Vinall,** general agent, Cleveland, appointed general traffic agent, Chicago, effective March 1, to succeed **Jack E. Andrews,** promoted to general freight agent, replacing **Walter P. Schindel,** transferred to Louisville, Ky.

INTERSTATE COMMERCE COMMISSION.—**Stephen A. Aplin,** assistant chief examiner, Bureau of Formal Cases, appointed director, Bureau of Rates and Practices, Washington, D.C., succeeding **Frank E. Mullen,** who retired January 31. **J. H. Smith** will continue as an assistant director. **James J. Williams,** hearing examiner, appointed assistant director, succeeding Mr. Aplin.

LACKAWANNA.—**George M. O'Brien,** assistant to general storekeeper, Scranton, Pa., appointed assistant purchasing agent, New York.

NORTHERN PACIFIC.—**J. A. Young,** district engineer, Spokane, Wash., transferred to Seattle, succeeding **T. N. Buchanan,** who retired March 1. **R. G. Brohaugh,** assistant district engineer, Spokane, appointed office engineer, Seattle.

Earl L. Ordell, assistant comptroller, St. Paul, appointed comptroller there, to succeed the late **Robert L. Fulton** (Railway Age, Feb. 17, p. 32).

UNION PACIFIC.—**Randall B. Kester,** Oregon Supreme Court justice, appointed general solicitor, UP, Portland, Ore., to succeed **Roy F. Shields,** who retired March 1.

J. A. Golobick appointed director of sales relations, Omaha.

H. C. Dunfee named general traffic agent, Oakland, Cal.

WRIGHTSVILLE & TENNILLE-WADLEY SOUTHERN.—**J. L. McMillan** appointed president and general manager, Dublin, Ga., succeeding the late **DeWitt C. Rogers.** Mr. McMillan was formerly agent in Savannah.

OBITUARY

Paul E. Bickenbach, 61, general superintendent of dining car service, **Illinois Central,** died February 27 in Illinois Central Hospital, Chicago.

Harvey C. Marmaduke, 73, retired executive assistant to the president, **Illinois Central,** died February 25 at Edgewater Park, Miss.

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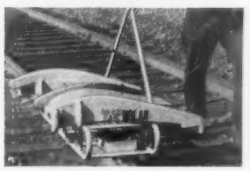

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50½ in.	15½ in.	6⅞ in.	88 lbs.

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End the ICC?—Not Unless . . .

The high-brow conservative magazine, National Review, a few weeks ago came out editorially for abolishing the Interstate Commerce Commission. Life magazine in its March 3 issue advocated practically the same thing, concluding that "surely we can spare the ICC more easily than we can spare a sound railroad system."

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Such attacks on the Commission and the Act it administers are dramatically effective in drawing public attention to the shortcomings of the regulatory law. But, with full appreciation of the discernment and forthrightness of these two magazines—it must be noted that abolition of the Commission and the federal regulatory law would by no means solve the railroads' problem of over-regulation—in some ways it might leave them worse off.

The ICC and its friends should take warning from these attacks. As this paper has pointed out more than once—by resisting curtailment of powers no longer needed or justified to protect the public—the ICC invites extremist opposition. It's like the prohibitionists—at one time they could have satisfied their opponents by conceding the legalization of beer and wine. But they wouldn't yield an inch and they wound up with total repeal.

There's no doubt whatever that competition is a much better protector of the public interest in reasonable rates and adequate service than any regulatory body can be. And continuing detailed regulation of railroads today, more severe even than in the monopoly days, adds no protection to the public that competition is not already providing. Over-detailed regulation serves merely to pauperize the railroads—and it must be quickly moderated to prevent ruin.

But the country is not going to get freedom from regulation that will permit railroad survival, merely by repealing the Interstate Commerce Act or abolishing the ICC. If that should happen, the railroads would be left at the mercy of the state commissions, which, as often as not, are much less liberal in their treatment of the railroads than the ICC is. In fact, the ICC often has to intervene to prevent restrictive rate action by state commissions—protection the railroads would lose if the ICC were abolished.

Also, it is the state commissions, not the ICC, which require the continuance of red-ink passenger services—and, to remedy this disastrous situation, the railroads are advocating that jurisdiction over service abandonments be transferred from the states to the ICC.

There is the further consideration that complete repeal of the Interstate Commerce Act would leave the railroads exposed to the Anti-Trust Act—probably denied the right to consult with each other on questions of pricing. Such a prohibition may be just and workable for other industries which do not *have* to cooperate in their service to the public, but it would be a disaster for the railroads and their customers. Montgomery Ward and Sears do not have to consult with each other to serve their patrons, but railroads *must* do so, because theirs is an inter-company business.

•

Instead of junking the Interstate Commerce Act out-of-hand, what should be done instead is to go over it clause by clause and delete every sentence that confers power that is not clearly needed, today, for public protection. In Britain, Parliament has done just that with the law regulating the British railways—with the result that regulatory powers have been reduced to the minimum, but not altogether abolished.

AMEND IT OR END IT?: Unless the right of railroads to make rates freely (above a floor of direct costs), and to engage in other forms of transportation, can be conceded by amending the Interstate Commerce Act—then repeal may be the only answer, as National Review and Life magazine advocate. But realistic amendment of the Act, rather than its complete repeal, would be far more helpful to the railroads.

In the New Orleans Union Passenger Terminal, Okocord was specified for stand-by cable after careful inspection of many other types. Uninterrupted service has proved the durability of Okocord in this tough job.

Okocord assures in-station comfort for New Orleans passengers . . .

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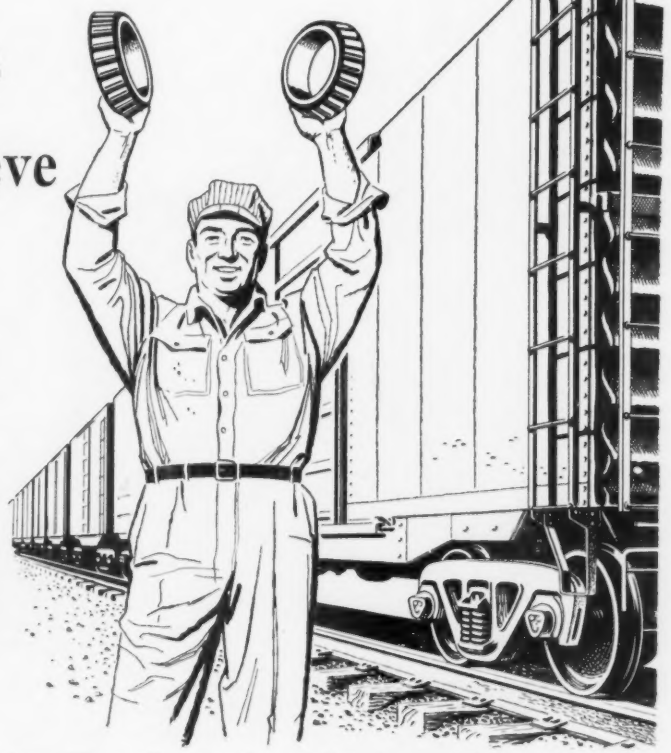

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They not only cure the hot box problem but Timken bearings also get rid of the frequent inspection and lubrication that all friction bearings, with or without "crutches", require in order to function at all. With Timken bearings, terminal bearing inspection time is cut 90%, lubrication cost by as much as 95%. And the new Timken *heavy-duty* type AP (All-Purpose) freight car bearing assembly can go three years without adding lubricant. This means substantial added savings. When all railroads go "Roller Freight" they'll stand to save an estimated $224 million a year and earn a 22% annual return on their investment.

Timken bearings *roll* the load, don't slide it. There's no chance for metal-to-metal sliding friction. And the tapered design of Timken bearings makes them the only bearing you can count on to end the hot box problem. The taper prevents lateral movement, rollers and races can't skew and scuff. Bearings last longer. And because there's no pumping action, less lubricant is needed.

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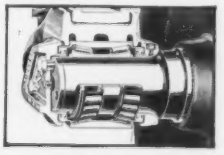
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